GRUMMAN plane news

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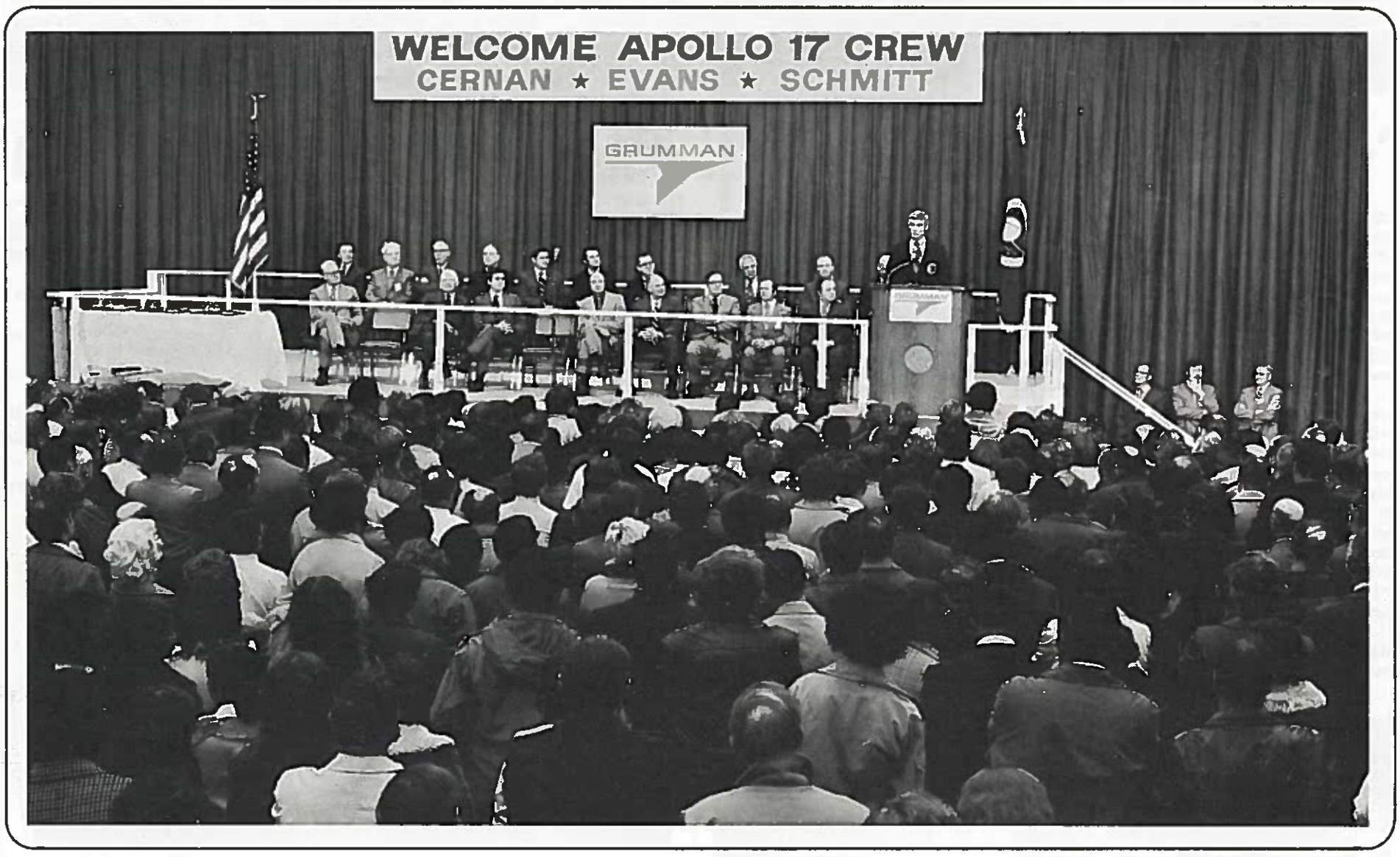

Apollo 17 astronauts 'come home' to praise Grumman team

The men of Apollo 17, of spacecraft America and Challenger, "came home" to Bethpage January 23.

The trio — Spacecraft Commander Gene Cernan, Lunar Module Pilot Harrison (Jack) Schmitt, and Command Service Module Pilot Ron Evans —met with the press at Plant 25 and shortly afterward moved to a hangar in Plant 4 to receive a gathering of about 1,500 men and women of Grumman, who listened, pridefully, to the astronauts' observations of their lunar mission.

Distinguished service medals

With them on the reviewing stand were Company executives, Navy personnel, two Long Island Congressmen, James Grover and John Wydler, and Nassau County Executive Ralph Caso. In one of the awards ceremonies, Caso presented each astronaut with the county's distinguished service medal.

The major event, though, was the casual, brief, and often witty performance in the hangar by the astronauts. Yet, perhaps that's possibly misleading, for the men of Apollo 17 did not come to Grumman to do a comedy routine; rather, they came with serious and deeply meaningful intent, as witness Cernan's comment that "No man stands alone." He amplified his feelings on that score by referring a number of times to the broad and magnificent team essential to what has been accomplished in the Apollo program.

All sorts of people, with a vast assortment of talents and skills, made it all possible. "There are no big men and no little men," he remarked; there were people of equal stature. The man sweeping the floor was needed as much as the engineer evaluating data. Everyone had to perform his job well to guarantee a successful mission.

He addressed himself directly to the crowd, to those who had a part in the Lunar Module effort, and declared uniquivocally that they and the people who worked on Apollo 17 — not so much the astronauts — deserved the accolades.

A somewhat similar theme ran through the remarks of Ron Evans and Jack Schmitt. Evans called the mission "a perfect example of the professionalism, dedication, and desire" that made the spacecraft so fine. And he said, "I salute you!"

'In love with it'

Schmitt spoke of the LM (Challenger) in warmly personal terms . . . that when he was in it "It acts like a person . . . you are in love with it." He went on to observe some deeper meanings that can be drawn from the manned Apollo flights — first, that the Command Service Module proves that you can "live in the universe," not just on earth, and secondly, that "the LM proves you can work in the universe." Knowing that (paraphrasing Cernan), the Apollo experience is "a stepping stone to the future," going beyond the universe.

This deep and philosophical sort of stuff — along with most earnest tributes to Lew Evans for his dynamic leadership in the LM Program and space work — was balanced beautifully by the bright banter of the astronauts as they ticked off some flight memories. One of the wowsers was generated when Schmitt got his turn at the microphone. Schmitt, of course, is not a Navy man, as are Cernan and Evans, and he called attention to the Grumman band's emphasis on "Navy music," and particularly "Anchors Aweigh." As a geologist, he noted, to be fair there should have been a "rock" group.

He should have known he'd not get by unscathed. Evans adlibbed a little routine that went (roughly) like this:

At first, as the mission progressed, it was Harrison Schmitt, then Jack

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Salute McDermott . . . again

Paul McDermott was back in town last week sporting a blue knit suit, steel-rimmed shades, and an antique watch fob. That may not seem out of the ordinary, but until a couple of weeks ago Paul's uniform-of-the-day was fatigues, and, he says, there were some people who thought he didn't own a suit. McDermott is back from South Vietnam—he had been there since January, 1968 except for a couple of months off in 1970 for good behavior—where he served as a Grumman Field Service representative with the U.S. Army.

McDermott, shown above (L) with Nick Scobbo, director of Field Service, brought back with him a commendation from the Army for "outstanding service in support of Mohawk operations throughout Southeast Asia during the period November, 1971 to November, 1972." The citation, signed by General Fred C. Weyand, stated: "Your unfailing response to all requirements . . . reflects admirably upon yourself and the Grumman Aircraft Corporation." It was the second such commendation awarded to McDermott.

Paul, who has more than 20 years' service with the Company, spent the first 15 in production, first as an aircraft electrician and later in Production Control and Supply Operations, before joining Field Service in 1967. Now he's back in Bethpage again. He won't be switching careers, but he will be switching allegiances, in a sense: he's scheduled to go back to school to learn about another Grumman mainstay, the A-6 Intruder. And when the retraining has been completed, he'll probably become a traveling man again.

Honor Intruder pilots

It was a proud day for two Intruder pilots and a bombardier/navigator aboard the carrier Saratoga one day last fall. It was then that Vice Adm. Frederick (Mike) Michaelis presented them with the Silver Star, one of the highest combat awards in the United States. Cdr. Dick Bordone (R), Commander of Attack Carrier Air Wing 3, was the first to receive the award from Adm. Michaelis, Commander of the Naval Air Force, Atlantic, accompanied here by Capt. James R. Sanderson, Commanding Officer of the Saratoga. Bordone was cited for leading a successful air strike on North Vietnam through intense surface-to-air missile and automatic weapons fire.

Next to receive the Silver Star that day were Cdr. Charles Earnest and his bombardier/navigator, Lt. Cdr. Grady Jackson. Earnest, while flying with Jackson, directed a successful daring night inland rescue of a downed pilot in a heavily defended area of North Vietnam, exposing his aircraft to intense enemy fire while effecting the escape.

In more recent news from the Saratoga, however, it was reported that Commander Earnest and Commander Jackson crashed into the sea following a catapult accident. Commander Jackson survived with some injuries, but Commander Earnest was killed in the crash.

Prowler's new 'Centurions'

Prowler crews are in the news, both in Southeast Asia and Stateside. Aboard the carrier America last month, Cdr. E. F. (Rosey) Rollins Jr., skipper of VAQ-132, was the first naval aviator to complete 100 arrested landings in the Grumman EA-6B Prowler.

Rollins achieved "Centurion" status during VAQ-132's fourth line period on Yankee Station in the Gulf of Tonkin, and shortly after, Lt. Walt Gromada, personnel officer for the squadron, became the second Navy pilot to reach 100 arrested landings in the Prowler.

The electronic-counter measures squadron began the introduction of the EA-6B to the Fleet in July of 1972, and into combat on the 12th of that month when a combat flight was flown in support of the air wing on the Saratoga.

They're called the 'Wizards'

. . . Back in the States, the men of VAQ-133 who keep the Prowler flying at the Naval Air Station on Whidbey Island, Wash., have been credited with setting another type of record, this one of the scholastic kind. And the guy who decided to name VAQ-133 the "Wizards" could have been clairvoyant. According to Lt. (j.g.) Terry Ekstrum, public information officer for the squadron, of the 42 men in the group who took Navy-wide examinations in August of '72, 35 of them were selected for promotion. That figures out to a selection rate of 83 percent—or "phenomenal" as Ekstrum calls it.

In a late report from the Pacific, the Lancers of VAQ-131 set a record for the number of flight hours during a month by a four-plane EA-6B squadron when they amassed a total of 258.4 while operating off the USS Enterprise in the Gulf of Tonkin. The squadron, commanded by Cdr. Lucio Diloreto, also completed one full year of accident-free flying in the middle of November.

Still collecting awards

The "Hummers" of Carrier Airborne Early Warning Squadron 123 are back in the news again. Earlier this month Plane News reported that four men in the squadron were awarded 1000-hour Hawkeye flight plaques. Prior to that the Commander of Naval Air Force, U.S. Atlantic Fleet, had notified the squadron that they had earned a certificate for meritorious achievement during the previous year for operating free of major accidents, thereby contributing directly to the safest year in naval aviation history. Cdr. J. D. Larison Jr., commanding officer of VAW-123, accepted the award.

Cernan on Grumman aircraft: '. . . Nothing short of superior'

(Continued from page 1)

Schmitt, then Dr. Jack Schmitt, then geologist Dr. Harrison "Jack" Schmitt . . . until the Navy won: now it was "Seaman Schmitt."

In another sequence, Evans remarked that it was a lovely flight except that a "tin can" (the LM) kept blocking his view on the way to the moon.

And there was an election in space. It came as the ascent stage lifted off the moon's surface . . . and Cernan and Schmitt voted for Ron as "the most desirable to see next."

The press conference was a bit more businesslike, though quite as rewarding. Schmitt handled an inquiry about the LM — which he called a "field vehicle" — and said "it did exactly what we expected it to do," and that it was "perfect." A reporter asked if any of the three astronauts had "fear" during the mission. Cernan said no, but there were "moments of apprehension," but nothing that would rank as fear. And after all the extensive and intensive training that astronauts go through, if you're afraid you better not stay in the program.

Cernan also responded to a query about the F-14 by remarking that "I've flown a lot of Grumman aircraft in my life . . . and they're nothing short of superior."

But the main business of the day was Apollo, and, during the session at Plant 4, Schmitt brought out a thought that may have been lurking but unexpressed in the minds of many. In a direct and wholly inoffensive way, he touched on the meaning of the Apollo odyssey and said that ending the program was, in his view, a mistake. It was a part of man's growing knowledge bank; and "how can we use our expertise on other problems on earth." The inference seemed clear: after accomplishing so much and assembling the finest organizational approach in history, how to proceed now if we dismantle or hobble it? It was, of course, a rhetorical question—but a meaningful one.

The executives at the meeting (and many elsewhere) are grappling with that same type of issue. In fact, aerospace executives are certainly not the only people concerned. But that was not for this brief meeting. Rather, the astronauts' visit focused on three other matters (if it's really sensible to look at things that way): Grummanites to praise the astronauts' achievements, astronauts to honor the record of Grumman's LM efforts, and both to respect and promote excellence.

So, the tokens and forms: Grumman Corporation President Jack Bierwirth on hand to lend support to what will probably rank as the single greatest accomplishment in history; Joe Gavin, President of Grumman Aerospace, to present each astronaut with a silver desk model of the LM; and the astronauts to present to Vice Chairman Bill Zarkowsky, for the Company, the patch and flag Cernan and Schmitt carried to the moon and back.

Yes, tokens and forms . . . those signs of recognition that enrich immeasurably the spirit of life.

THE WHITE HOUSE

WASHINGTON

January 9, 1973

Dear Mr. Towl:

Few events in the history of exploration have been as dramatic as the journey of Americans to the moon. But even as we take pride in the astronauts themselves, we also join them in recognizing that these greatest of scientific explorations were made possible by the thousands of other men and women whose energy, devotion and considerable genius have brought this Nation to a position of pre-eminence in space.

The knowledge gained through your company's contributions to the Apollo program will benefit humanity for centuries to come. I extend to you my congratulations and the thanks of the American people for a job well done.

With my best wishes,

Sincerely,

Richard Nixon

Final salute from Apollo skipper

". . . . there were many giants and many shoulders that allowed you to reach higher and higher. But a pair of those shoulders, probably the tallest and certainly among the strongest, belonged to a man who is no longer with us."

That man's name is Lew Evans, and the speaker was Gene Cernan, Spacecraft Commander of Apollo 17, the last of the Apollos.

"Lew was the man who basically gave birth to the Lunar Module. Lew is the man who cradled her through some of the very disappointing moments. As a matter of fact, I'd say Lew changed her diapers several times to get her out of the crib over many, many years."

Cernan remarked, too, that as LM-12, the Challenger, was being put together, "Lew took a very personal interest in everything that happened, every crew that ever flew and every LM that went out of Grumman." Cernan added that Lew had told him, "Gene, you know we want to make this right. You just tell us and we're going to make it right, the way you want it . . . "

Etched in Cernan's memory also was Lew's statement, "This may be our last LM but it's going to be our best LM." Cernan called that "a fitting eulogy to a guy we all thought a great deal of—to a guy who contributed a very great deal to what we call Apollo. . . ."

The lights burn brightly

At Plant 25, the intense, often bone-tiring, effort continues. It has been that way since early in November when the first of four Requests for Proposals on major Shuttle subcontracts arrived at Bethpage. The competition is a critical one for the nation's aerospace firms. For the winners, it means continuing space work well into the 1980s; for the losers, it means there won't be any more tomorrows—at least in manned space—for a long, long while.

Three design proposals, those on the vertical tail, wing, and fuselage mid-section, have already been submitted to North American Rockwell, prime contractor for NASA on the Space Shuttle. This Wednesday, January 31, the last and largest of the four design proposals—the Orbital Maneuvering Subsystem — is due at Downey, California, home of North American's space division.

For Dick Feyk, Al Kemp, and Ed Offenhartz — they managed the design proposal efforts on the tail, wing, and mid-section—and some of the others on the Grumman space team, the long days and nights are over. They can do nothing but wait.

But for Ozzie Williams and members of his Orbital Maneuvering Subsystem team, the pressure continues to build. And it won't ease until Wednesday, the due-date for OMS. As the minutes tick off until then, there will be many engineers, editors, writers, artists, secretaries, and probably, even vice presidents dashing about Plant 25—their efforts coordinated by Williams—trying to make the final Orbital Maneuvering Subsystem proposal a winning one.

Structurally, the first three design proposals have a strong "family" resemblance, but OMS is something more. While it, too, bears the same structural stamp as the vertical tail, wing, and fuselage mid-section, it is more a systems integration effort, similar to the one performed on the Lunar Module. Perhaps that is why Williams refers to OMS as being "a natural for us."

And it's apparent that Grumman is going after OMS—as it did with the first three proposals—with the best it has. Shuttle Program Manager Don Markarian has provided Williams with much of the same LM team that integrated reaction-control, descent, and ascent propulsion systems into a fantastically successful moon lander.

It hasn't been easy. Following the hot competition for the prime NASA Space Shuttle contract — Grumman finished second to North American in that one—there was deep shock. But there was no time for tears. Instead, the emphasis shifted. Since Grumman could no longer expect to be prime contractor, the next most important objective was to win those subcontract proposals where Grumman could best make its contribution to the Space Shuttle Program.

From July through October it was mostly preparation. In November, the real action began. Think about it: delivering four major design proposals, mostly overlapping, in only three months' time, with the due date for the final two only seven days apart!

Brief respite

The lights burned brightly at Plant 25 most every day and night all through November, December, and January, with only a brief respite for family get togethers at Thanksgiving and Christmas. That schedule has been variously described as "most taxing," "extremely difficult," "demanding." Try "exhausting." That may be more descriptive of the total effort, especially in the final days and hours before a proposal is finally submitted. As one proposal manager put it: "A lot of people here are making extreme personal sacrifices to try and win these contracts for Grumman."

"While a large number of people have worked very hard on these proposals," said Markarian, "some of the strong shoulders that come to mind are Bob Carbee, Bob Botwin, and Bill Lamberta. They exemplify the kind of commitment we've been getting from everyone on the program. Most successful activities require a team effort, but the preparation of a proposal really demands the kind of all-out 'pulling together' that our people have demonstrated these last three months."

"Appreciation goes beyond the people physically located in Plant 25. Many in the home sections and departments have made equally dedicated contributions and should also share in the satisfaction of delivering proposals of which we can be proud."

Winners in the competition for Shuttle sub-contract work will move into Phase II early next spring. That could mean the design, development, test, evaluation, and production of hardware for five Orbiters. Should Grumman be a winner, it means a trip into the next decade of space hardware and space travel. The price of that ticket? Team effort certainly; but don't forget some would say "personal sacrifice."

(Photos by Harry Prodromides and Fred Annette)

Marchel finds giving can be fun, collects top prize of color TV

While small in number, those people attending the annual prize drawing of the United Fund of Long Island at 10 a.m. on January 16 in the main lobby of Plant 5 served as enthusiastic representatives of thousands of eligible employee contestants who had contributed to the United Fund last year.

Gus D'Errico, head of Employee Services Office, shuffled the neatly cut name cards in the barrel for Vice President Jack Rettaliata, director of Public Affairs to draw the first eight winners —all of whom are full share contributors to the United Fund. Then the last four winners from among the employees who contributed less than a full share were selected.

How did the winners react?

Victor Marchel, a contributor of the United Fund for 5 years and first place prize winner, comments that he contributes because: "It's something I can do in a small way to help people who need help?"

Victor Marchel

Robert Ryan

Richard Inman

'I believe'

Robert L. Ryan, a tool inspector in Plant 2 who won a Fisher amplifier with Garrad turntable and speakers said he never won anything in his life but a yoyo at age 12. He has been a contributor for over 20 years and says: "I believe in what the United Fund stands for; it's an excellent way to fulfill each citizen's obligation to support local charity."

Third place winner, Richard Inman, with Aircraft Programs in Plant 6, enthusiastically adds that the United Fund is "an opportunity to support many organizations and to help many needy people."

A total of 9,013 employees of both Grumman Aerospace and Grumman Data Systems will contribute a projected total of $412,000 through cash contributions and payroll deductions for the coming year. The total contributions for the Long Island United Fund are expected to be $2,931,000 while the total amount contributed is below the United Fund's goal of $4 million, it is actually $12,000 more than was raised by the Fund last year.

Prize Winners

1. VICTOR MARCHEL, Warehouse, Plant 21 - Sylvania 25" color console T.V.
2. ROBERT L. RYAN, Tool Control, Plant 2 - Fisher 120 watt amplifier with Garrard turntable and one pair of Super-dynamic speakers.
3. RICHARD INMAN, Aircraft Progress, Plant 6 - G.E. 25" color console T.V.
4. HUGH HART, Inspection-electronics, Plant 7 - RCA 23" color console.
5. FRED PIWOWAR, Maintenance facility equipment, Plant 3 Sylvania stereo console AM-FM.
6. CARL WINTERSTEIN, Vehicle production engineer, Plant 1 G.E. 18 cu. ft. frost free refrigerator.
7. SONIA DANN, Inspection tooling, Plant 2 - G. E. upright freezer.
8. ANDREW BOKRASH JR, Facilities Maintenance, Plant 2 - G. E. electric range 30".
9. NORMAN HILDERBAND, Subassembly, Plant 36 - G. E. 23" b/w table model TV w/ stand.
10. JOHN ZOCKOFF, Optical Tool & Metrology, Plant 2 - Westinghouse Automatic Clothes dryer.
11. JOSEPH LAMAGNO, Press, plant 2 - G. E. Portable dishwasher.
12. JOSEPH ACHTZIGER, JR, Production manufaceure, plant 40 G. E. 16" portable b/w T.V. w/ stand.

Somebody's happy. Vice President Jack Rettaliata, assisted by ESO head Gus D'Errico, seems to enjoy picking winners—and what could be a surer way that doing it during the drawing for United Fund prizes. A total of 12 prizes were awarded to United Fund participants at Grumman. (Photo by Marie Trimborn)

NASA cites five at Grumman for contributions to technology

Five Grummanites have been cited recently for contributions to NASA's Technology Utilization program.

Three of the men were co-innovators of an "Algorithm for Liapunov Stability Analysis," which was published in a NASA Tech Brief. For their efforts, Gunther Geiss, Victor Cohen, and David Rothschild each received a $25 check from NASA. A Certificate of Appreciation from NASA went to Robert Quinn and Joel Chesler for their work on the "Development of a Digital Computer Program for the Design and Evaluation of Manipulator Systems."

As explained by Vice President Tom Kelly, who's in charge of the Company's space efforts, the men who have made these types of contributions "expedite the transfer of space research technology to the non-space technical business community." This "spin-off' activity is nothing new. In fact, it's a part of the Space Act of 1958.

The heart of the Geiss-Cohen-Rothschild concept was the development of a numerical algorithm for determining the stability of non-linear systems and for applying it to a proposed OAO "paired-tracker" attitude control system. The Quinn-Chesler work involved a study of mechanical manipulators for performing docking operations between spacecraft.

The New Technology Monitors, Arthur Haapaniemi and Armand Affe, point out that, "There are probably many, many more innovations floating around unreported, and they should be reported because these ideas expand knowledge

So scan your memory . . . and report those previously un-noted innovations to Art or Armand. They're in Plant 25 on Extension 2836.

Tavitian hot in target win

Tom Tavitian fired 269 to lead the Grumman E squad to a 1,013-946 victory over Republic in the L.I. Industrial pistol circuit early this month. Aiding that win in the .22 caliber sharpshooter competition were Tom Cassino, 258; Mat Spencer, 254; and Art Granata, 232.

In their next match, the E's whacked IBM, 957-611, to go even at 3-3 in the league standings. Jim Barry's 243, Spencer's 241, Tavitian's 241, and Cassino's 232 led the winners.

The Grumman C's record now stands at 4-1 after a 1,012-968 triumph over Pan Am. Mike Baumgarten's 265 paced that win. Others contributing to the total were Sy Cohen, 252, Gordon Woodruff, 249, and Roger Metzger, 246.

But in the South Shore League, the Grumman Center Fire squad suffered its third loss, this one to the Gunners, 1,038-1,087. Scores included Dave Rice's 268, Ron Trenkner's 264, Phil Boehm's 256, and Greg Criscione's 250.

Scholar note . . .

After-hours students are reminded that applications for spring term of 1973 must be filed with the Tuition Reimbursement Office, Department 326, Plant 39, within 15 days of the school's last date of registration.

Application forms are available at the Employee Services Offices and Field Base Administration offices.

On display. Floyd Thomas of Business Development briefs visitors to the Grumman areas at the AIAA meeting on Health System' Operating Room Console. Other Company exhibits included the F-14, hydrofoil Flagstaff, Lunar Module, and Large Space Telescope.

If you're thinking about a change, new withholding forms due Feb. 12

All Grumman Aerospace employees have recently received a W-2 form listing earnings for Calendar Year 1972, and the amount of Federal, state, and, in some cases, city withholding taxes deducted from those earnings. And right about now, some people are considering increasing their withholding, and others taking the opposite view—why not have less withheld . . . ?

About February 12, Paymasters, Employee Services Offices, and paycheck distribution points will have a supply of Internal Revenue Service (IRS) Form W-4, called "Employee's Withholding Allowance Certificate," which includes a work sheet and a card form. You may need the work sheet to determine the number of exemptions you are entitled to claim; the card form, containing the number of dependents you wish to claim, should be sent to Personnel Records, Plant 28.

But please note:

(1) You may **not** claim more exemptions than the Revenue Law allows. (The work sheet will help you.)

(2) You can always claim less exemptions, or no exemptions, if you wish more tax withheld.

(3) Should your tax situation require a still larger deduction you may show an amount (even dollars, please, no cents) at the "Line 2 Additional amount . . . . $ . . . . ". This additional amount, **along with the normal amount based on your exemptions,** will be withheld and remitted, in your name, to the Department of the Treasury.

The work sheet indicates: "If you need more detailed information see the instructions that came with your last Federal Income Tax Return (the one you will file with your 1972 earnings) or call your local Internal Revenue Office."

State and city tax exemptions (New York State, New York City, California) are considered to be the same as the number of Federal exemptions you have claimed, unless you file a separate Exemption Certificate on the form prescribed by your state (or city) revenue office in accordance with its regulations.

Employees working in Georgia, Maryland, and Virginia must file separate State Exemption Certification as withholding in those states requires computation on differing bases. At your request, and where your state and city regulations permit, an additional amount of tax will be withheld and remitted, in your name, to the cognizant tax office.

At present, Grumman Aerospace is not required to withhold taxes in states or localities other than those set out above and consequently no procedures exist for doing so.

After you have determined how many (or how few) exemptions you should claim, complete the Card Form W-4 and any state certificate you find necessary. Send them to Personnel Records, Plant 28. Your record will be changed as you request, or, if that number of exemptions is already on file for you, the new certificate will be substituted for the old, thereby making your exemption status current as of that date.

Please fill in all space on the card form. If you are married, include your spouse's birthday. A dash (—) may be put in line 2 ($—) if no additional amount of withholding is requested.

A final reminder from Charles Buxton, director of Payroll Operations: "The amount of your taxes is a matter between you and the Internal Revenue Service. Neither Grumman nor any of its employees can officially advise you on your personal income taxes."

Grumman products on exhibit at AIAA meeting

The ninth annual meeting of the American Institute of Aeronautics and Astronautics was held recently in Washington, D. C., and an estimated 1,000 people stopped at the Grumman exhibit to learn about the Company's activities.

Not only was President Joe Gavin there, he was one of the panelists who discussed space technology. This was part of a larger subject, space transportation.

This time around, the theme of the conclave was "Aerospace and the Public Interest." General Chairman Edgar M. Cortright and Co-chairman Lt. Gen. James T. Stewart, in an introductory statement, noted that "we should take due pride and call proper attention to the simple fact that our aerospace industry and its primary products are not only relevant, but essential to the welfare of the United States and its people." By highlighting the areas of security, transportation, and space applications, they said, "we will attempt to make more clear and understandable what the future of flight holds for us all."

In line with that, Grumman had 10 to 12 of its people on hand to explain exhibits and their significance. There were models of Grumman products—F-14, the hydrofoil Flagstaff, a Lunar Module site, an Operating Room Console, a version of the space shuttle, the Large Space Telescope—and talks on what Grumman has accomplished and possible product lines of the future.

Tomcat on display with other famous 'Cats'

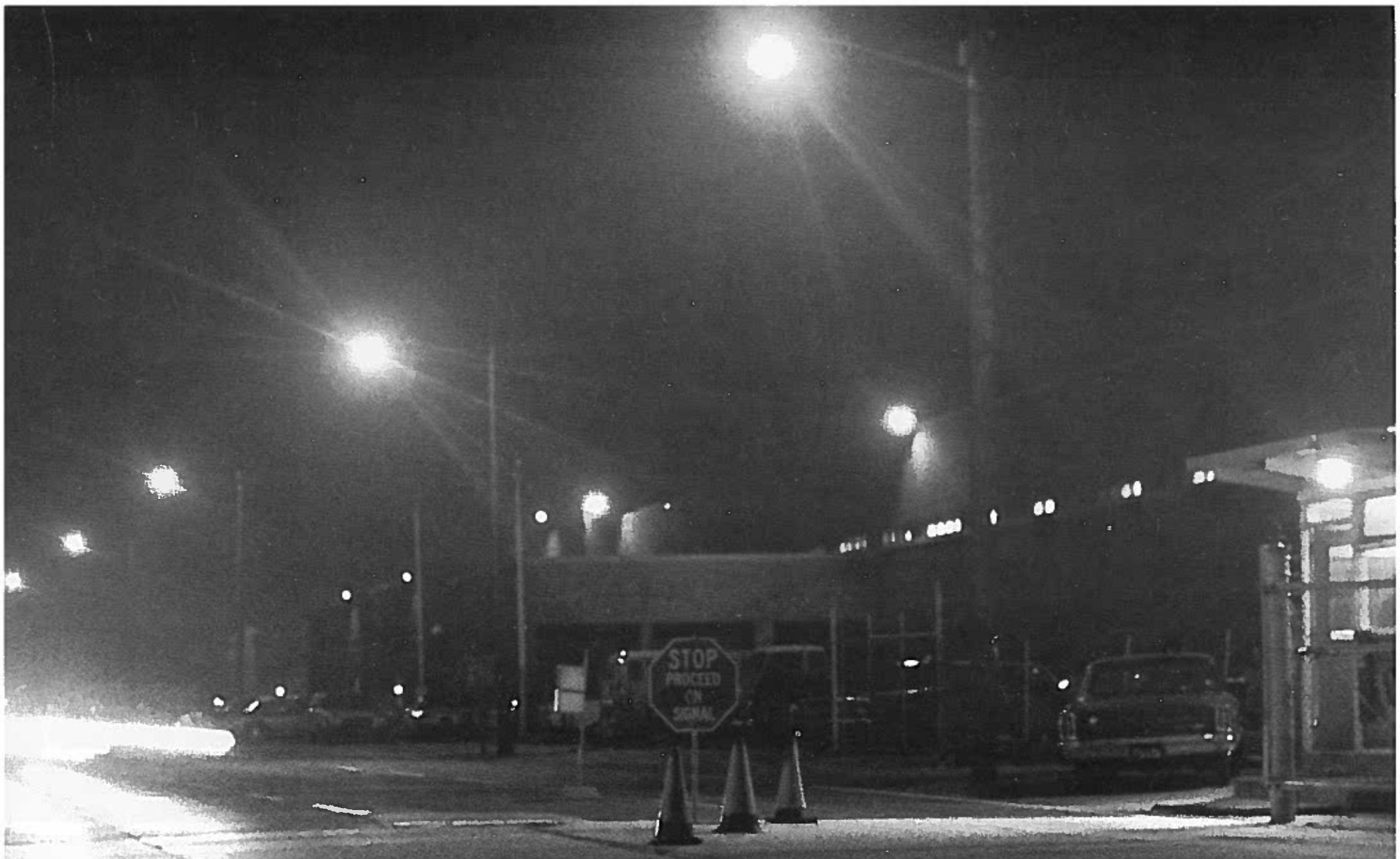
The Grumman Tomcat joined an elite group of famed Naval Aircraft a couple of months ago when a scale model of the newest Navy fighter went on display at the Naval Aviation Museum at Pensacola, Fla. The sleek, swing-wing plane, showing markings of VF-124, the F-14 training squadron at the Naval Air Station at Mirimar, Calif., was presented to Adm. Arthur W. Radford (Ret.) (L), former Chairman of the Joint Chiefs of Staff, by Vice President Mike Pelehach. The occasion marked the ground-breaking for a new home for the museum at Pensacola.

Also present for the presentation were Rear Adm. Jack Bergen (Ret.) (3rd L), Board Chairman of Madison Square Garden; Vice Adm. Malcolm W. Cagle, Chief of Naval Air Training; Rep. Robert L. F. Sikes of Florida; and Dave Scheuer, Grumman Field Service representative.

If you plan to visit the Pensacola area, stop in at the Naval Aviation Museum. There you'll see not only Tomcat—built to 1/24 scale by the Plant 5 Model Shop — but all the other famous Grumman "cats" that have served the Navy so well.

Sorry about that . . .

In our last edition Jan. 12, we mentioned that Norm Egloff had 37 years' service with Grumman. Norm, who had been deputy director of Material-Purchasing before being named special assistant to the director of Procurement Management, joined Grumman in 1933 and holds Permanent No. 136—and anyone who can add knows that it doesn't take much figuring to determine that 1973 marks his 40th anniversary with the Company. Sorry about that, Norm.



Night People

Ted Crews . . . 2922

The name echoes clearly over the loudspeakers in various Grumman plants for Crews, a maintenance foreman. The time is 8:15 p.m. The Bethpage switchboard has been closed for the night and, until early next morning, much of the intercompany communication now channels through the Grumman guardhouse on South Oyster Bay Road. The result is a steady stream of paging that keeps nighttime activity bustling throughout Grumman's facilities.

Ted Crews . . . 2922

Morgan O'Brien, an 11-year veteran with the Company's 200-man security force, is on the desk. He is one of Grumman's night people. Like most security guards, he alternates between day and night duty, but tonight he is one of the 2,300 people who work for Grumman after dark.

Robin Custer . . . 84346
Robin Custer . . . 84546

O'Brien repeats all pages. On slow evenings, the desk guard may have 60 calls; most are paging requests, but some are emergencies that require instant responses from all the guards. At busier times, the desk man may have as many as 200 calls during the night.

"Wait by your car, ma'm," O'Brien tells a woman whose car has a flat tire, "and someone from our garage will be right over."

Lt. Joe Oliveri and Sgt. Jim Stolz come into the guardhouse for a cup of coffee. They have been outside in the subfreezing weather for nearly two hours investigating some broken windows at the Anchor garage on Central Ave., in Bethpage.

(Continued on page 8)

Photos by Bob Settles

Night People *(Continued)*

"It's a different set-up at night," says Stolz, who has been with the force 18 years. "If something happens during the day, you can generally call for help for things like medical treatment or car breakdowns. At night, we frequently have to handle emergencies ourselves. There just aren't that many people to run to at night."

"Tom Gray . . . 1812," O'Brien says into the microphone. "Tom Gray . . . 1812."

Oliveri, a stocky lieutenant, agrees. He has an affinity for detail about Grumman acquired over 22 years with the Company. "Night crews seem to be closer to one another, too," he adds. "Just imagine an employee at 2 a.m., his car won't start and he's stranded in a parking lot. It's bleak and lonely then. He dials 3895 and one of our guards soon gets it started for him. You can be sure those favors are appreciated."

"We need a messenger for a package that must be on a plane from Kennedy Airport for Point Mugu tonight," says, O'Brien, alerting a dispatcher at Transportation.

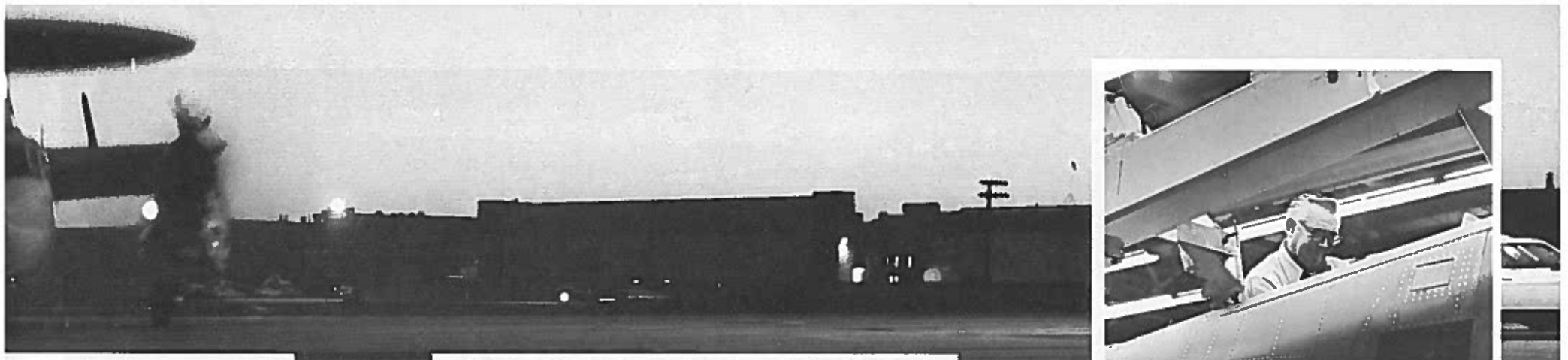
While the guards patrol all Grumman property at night—either in cars or on foot by making hourly "watch clock" rounds inside the various plants—a kind of eerie quiet prevails in some locations. Only skeleton crews are on hand there. In other areas, because of the fluorescent illumination, you have to remind yourself that it is nighttime.

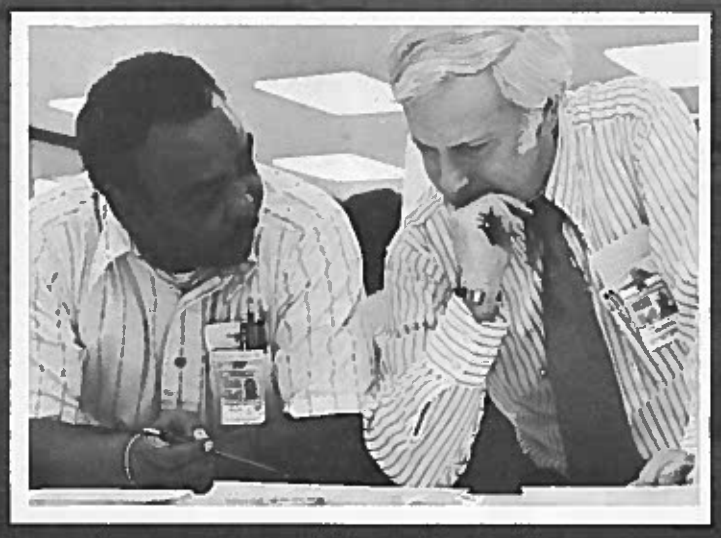
A buzzer sounds on the monitor above O'Brien's head telling him that a security guard is entering Plant 37 to make a routine check.

In Plant 3, for example, one of Grumman's numerous round-the-clock operations, several crews are on hand to keep the plant functioning throughout the night, running the precision machines such as drills, metal formers and skin millers. Plant 2, another example, is quieter; not that there is less activity but because most of the assembly operations are quieter than heavy machining operations. Nurses Helen Reilly in Plant 3 and Jane Sherwood in Plant 2 stand ready in sickbays to respond with medical treatment if they are needed. Plant 25 is ablaze with light until 2:30 a.m. while offices are cleaned, swept, and readied for the next workday. Grumman Data Systems and the nearby purchasing operation work through the night. In Plant 1, assembly operations continue through the night on the F-14, a sleek aircraft which, even in semicompleted condition, looks like a huge swan poised for flight; and in Plant 4, maintenance crews prepare commercial and military aircraft for the day's flight activities.

At Calverton, some 600 night crew employees are on hand. Some assemble new aircraft, some prepare planes for the next day's flight testing. A desk man at Calverton's security headquarters handles the nighttime communication system.

(Continued on page 10)





Lights are ablaze as some 2,300 persons keep many Grumman facilities in operation around the clock. Night shifts at Bethpage, Calverton, Wyandanch, Garden City and other L.I. plants range from small specialized crews to full-scale work forces.

• • •

Nighttime poses special problems, as well as pleasures, for many Grumman employees. Unlike their daytime counterparts, night crews have fewer people and services to call on for assistance. Still, willingness to respond to these situations cause many strong ties to develop.

After dark activities include purchasing work, maintenance of vehicles, machining operations. Night people enjoy reminding daytime employees: "We work while you sleep."

Night People *(Continued)*

The calls and paging between the guardhouses and the various plants continue throughout the night. The Company buildings set in low silhouette against the darkness, the almost empty parking lots, and the prevailing quiet belie the fact that inside these buildings there is plenty of activity. The night crew's functions are as varied as those of their daytime counterparts. Combined, the day and night people comprise the vital inner workings of Grumman, each one significant in his own right, both indispensable to the other.

At 12:30 a.m., shifts change. Charlie Rhatigan takes O'Brien's place on the desk at the Bethpage security headquarters. Things are momentarily quiet. Then, the calls, and the paging, begin, continuing through the night.

John Barnes . . . 3470
John Barnes . . . 3470

Hellcats open defense of title with two Industrial net wins

Setting out to capture its second L.I. Industrial league title, the Grumman varsity basketball team stormed over its first two opponents.

The Hellcats posted their first win by pounding the Nassau County Police, 96-84. With Jim "Roadblock" McKinstry controlling the boards, Eddie Krol and Ron Bartlett hit the hoop to build a 12-point lead in the first quarter. The Police came back to cut the lead to two shortly before the half.

"Big D" was the game of the second half with powerful defensive play by Frank Quarto, Jim Cruthers, and McKinstry. The scoring was evenly balanced with McKinstry leading the assault with 24 points, and Quarto, Bartlett, Cruthers, and Krol contributing 22, 18, 14, and 12 points, respectively.

Rolling over the Hazeltine team, 81-65, the Grumman cagers boosted their league record to 2-0. Superstar of the evening was McKinstry as he bulldozed his way under the boards to pull down 12 rebounds and sink 31 points.

McKinstry overpowered the losers' defense in the first period, scoring 11 of the Hellcats' 19 points. Walt Gleich and Jim Cruthers forced the losers to shoot from the outside, while Krol and Quarto froze the loser's defense with their great ball control and outside shots. By the final buzzer, the Hazeltine team had succumbed to McKinstry and his teammates.

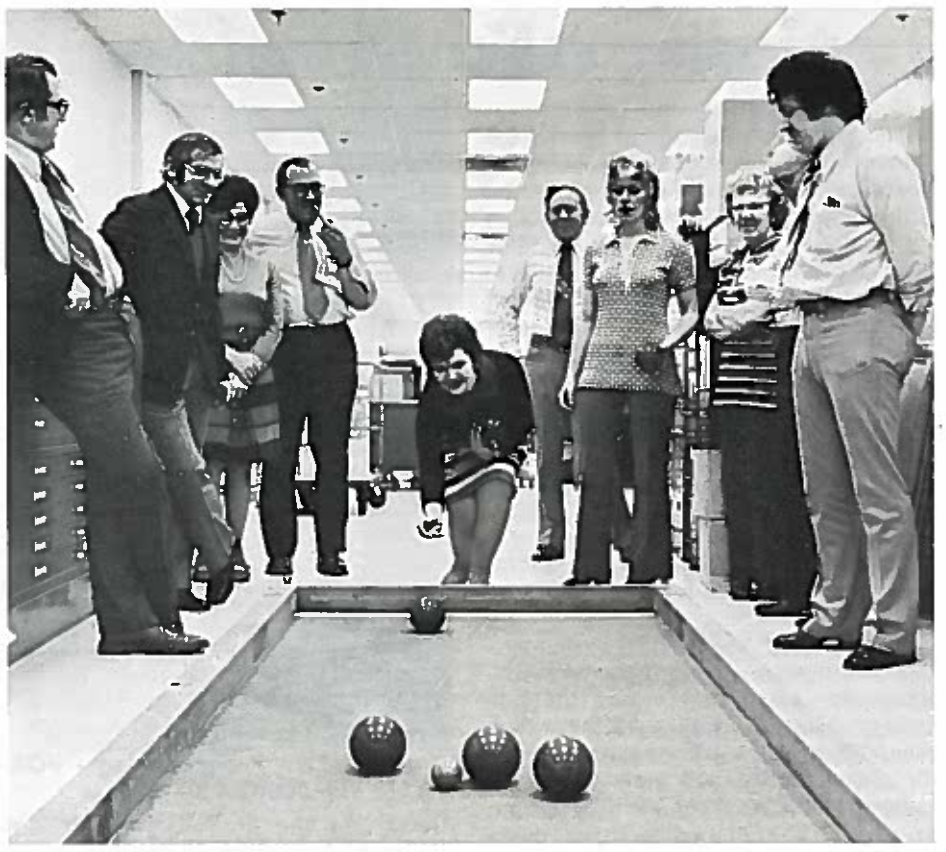
Drop one, though

In Huntington League play, the Grumman hoopsters moved into a three-way tie for first place honors with Arbor and the Green Machine. In the 78-68 win over Arbor, balanced scoring by Quarto (17), Cruthers (16), Hambrecht (11) and Bartlett (11), offset a 30-point performance by former CCNY star Marty Groveman of Arbor.

The Grumman team failed in its quest to conquer last year's champs, Green Machine, 112-95. Breaking the Grumman club's 15-game winning streak, the big Green Machine swept the lead away in the final quarter when the Hellcats failed to stop the winners' fast breaks.

Stage center

It's Grumman night at the Nassau Coliseum, Wednesday, January 31st. After only two successful years of league play, the Grumman Hellcats will hit the big time as they take on the Long Island Lighting Co. in a preliminary contest at 6 p.m. The N.Y. Nets challenge the Virginia Squires and "Dr. J" at 8 p.m. Tickets for Grumman Night at the Coliseum are on sale now at the GAA office in Plant 30 for $4:75; regularly they are $6.50. Student tickets are available at $2.75.



On the mark. Who ever heard of indoor bocce? Well, at Plant 34E they not only heard of it, they had a women's tourney, just completed, in which Connie D'Agostino edged Millie Mack for the title. That's Connie rolling to the victory with Millie at her side, with some interested spectators looking on. (Photo by Harry Predremides)

Mahoney's 640 string highest, but Evans takes lead in trials

Big scores were hard to come by in the first two sessions of the varsity bowling trials at Mid Isle Lanes in Hempstead, and a check of the results confirms the high-scoring drought. Herb Mahoney did his best to break out in the second session, hitting the top total so far, 640, with individual games of 254 and 214—but in the second three-game set of the session, Herb nearly hit bottom, scoring 484 to run his total to 2,253 over 12 games. Despite his momentary slump, Herb stands in third place, only 40 sticks behind leader Dave Evans. Dave put together series of 601, with 215 and 200 games, and 580 in the second session to go with a 519 and 593 in the opener.

Alston second

Altogether there were 73 contestants, all carrying averages of 175 or better, who signed up for the varsity bowling tryouts. And now there are only 32; the rest were eliminated after the first 12 games.

Starting off the trials with a hefty 256, John Alston, a former varsity captain, looked as though he might tear up the alleys in the initial session, but that ended pretty abruptly. His next game was 155, then 169, for a 580 total. Alston came back with another 580 the first night, then added 587 and 523 the following week for a 2,270 total.

Among the other highlights were John DiSalvo's 245-213-627, Frank Tucholski's 204-225-612, Ike Washington's 242-596, Jack Nielsen's 246-588, George Fowler's 214-590, Don Eivers' 211-201-595.

Following Evans, Alston, and Mahoney in the standings (as of January 20) were Fowler, 2,253; Buzz Goodman, 2,207; Rudy Dunkley, 2,205; Eivers, 2,204; Ed Hilbert, 2,197; Mike Greggo, 2,196; and Phil Piacentini, 2,194.

The trials were scheduled to resume last Saturday, January 27, and the 32 remaining participants will go to the line again next Saturday, February 3 at Mid Isle, starting at 5 p.m. After the fourth round, the starting field will be reduced to the top 10 in total pinfall for the 24 games, with the five starting berths for the L.I. Industrial Men's Tournament to be decided in the February 10 session.

Cava hits 267-642 in Gray pin action

Tom Cava must be wondering what a guy has to do to make it. A couple of weeks ago Tom flipped a sparkling 267-208-642. Ordinarily, that would be good enough for at least one record. But not in the Gray league. Harvey Knopf locked on to both individual marks in the league a couple of weeks ago by firing 276-700— and that's going to be hard to beat. Tom not only had to settle for runner-up honors in both those areas, but his big night did little to help the LM Men find a way out of their dilemma. They're still 12th —in a 12-team league. Other standouts: Mark Mellinger, 236-210-627; Stan Angur, 213-583 Don Raias, 224-578; and Harvey Knopf, 230-221-621.

Kirillin, Stehlin star

Al Kirillin put together a four-game total of 821 with help from a 235 in Masters play early this month, while Walt Stehlin tacked up 237-816. Other high scorers were Dick Spalding, 223-776; Vin Crevoiserat, 802; John Betterino, 793; and Sid Smith, 775. . . . In the Blue Mixed circuit, Don Curran's 529, John Traina's 508, Joy Elenick's 478, and Kathy Hager's 456 paced the field. . . . Mark Guss hit 209-574 and Dave Walsh 563 in nCentury Mixed action, while Nancy Gentzlinger shot 494 and Lil Frank hit 476 to head women's scoring.

Prochaska hits 624

Rounding out the top marks: **Rocket** - Larry Schneider, 205-566; Larry Gould, 210. . . . **Black** - Fred Wagnhauser, 203-214-610; Walt Becher, 213-200-584; Joe Russo, 239-581; Don Ketcham, 203-204-580. . . . **Trader** - Jim Rose, 242-602; Frank Gilmore, 210-203-583; Al Marhold, 201-209-583; Bob Washington, 579; Tom Wright, 207-577; Hank Mehl, 202-573. . . . **Woodbury Mixed** - Martha Juppe, 487; Kathy Degnan, 470; Frank Prochaska, 234-624; Ken Camidge, 586; Dick Bassano, 219. . . . Jerry Pless, 210-591; Dan Aquilino, 203-572; John Schwab, 225-589; Joe Gallo, 204-586; Joe Solomon, 203-581; Randy Dorn, 220-579; Tom O'Connor, 203-576.

Classified - Art Mahlstedt, 222-227-614; Jim Karika, 215-598; Charles Catalano, 202-224-597; Larry Orlando, 229-586; Dick Burrell, 229-583; John Herman, 203-210-601; Ed Meaney, 202-212-580. . . . **Patchogue Mixed** - Lois Haas, 509; Joan Burgess, 507; June Erickson, 492; Gene Burgess, 208-587; Ken Becker, 205-563; John Erickson, 214-567; Dick Lindstrom, 555. . . . **Hawkeye Mixed** - Dot Jacobsen, 239-509; Vince Crevoiserat - 211-587; Jo Tornatore, 482; Lil Klobukowski, 485; Chet Everoski, 206-209-574; Lee Newcombe, 479; Edna White, 477. . . . **Syosset Mixed** - Rita Mathia, 562; Eileen Toomey, 517; Monica Wotjtyniak, 201-515; John Betterino, 204-259-645; Rob Ogilvie, 222-205-621; Ed Miron, 541. . . . **Bethpage Nite Owl** - Jon Chuisano, 226; Rudy Dunkley, 211; Tom Szwejowski, 201.

'Ham' sessions

Beginning in February, the Grumman Amateur Radio Club will conduct a course covering theory and code for the novice amateur radio operator's license. Classes will be held at Bethpage weekly, for six sessions. For information and registration, call Ray Schubnel, club president, Ext. 3085, or Emmett Goodman, secretary, Ext. 87125.

The radio club operations station WA2LPO from the radio shack on the roof of Plant 5 on CW, SSB, and VHF. If you're interested in joining, please contact Schubnel or Goodman.

Training and Development offering more classes...

Corporate Training and Development is offering a number of after-hours courses again this semester to help students expand their knowledge and brush up on their skills. Registration is by phone, starting 8 a.m. Monday, Jan. 29 and continuing until 4:30 p.m., Friday, Feb. 9. There are no fees or tuition charges.

The courses listed are available to Grumman employees. For some courses there are prerequisites. Students need not have fulfilled a particular prerequisite by taking voluntary education courses: courses taken elsewhere or work experience can prepare a student for the more advanced courses.

For all courses, a minimum registration of 15 students is required.

Enrollment procedure

Enrollment is strictly voluntary. Students may register by calling the Voluntary Education Office at the extensions listed below. **Please note:** a specific phone extension is assigned for registrations for the day on which a course is given. The extension listed below which is prefixed by an asterisk (*) will be connected **only during the registration period.**

Registration calls will be accepted ONLY from 8 a.m., Jan. 29, through 4:30 p.m., Feb. 9, 1973 each working day.

Bethpage courses:

Monday evening courses - call Ext. 87521*

Tuesday evening courses - call Ext. 87522*

Wednesday evening courses - call Ext. 84413

Thursday evening courses - call Ext. 1282*

All Calverton evening courses - call Ext. 381

To reserve Programmed Instruction Text - call Ext. 84413

Certificates

Certificates will be issued to those students who have attended at least 80% of the sessions and have completed the required work in a creditable manner. Further information can be obtained by calling the Voluntary Education Office on Ext. 84413.

Student cost

There are no fees or tuition charges. However, students are expected to purchase their own textbooks. Textbooks may be purchased anywhere, but for students' convenience, the Voluntary Education Office will have textbooks available for purchase through the course instructor.

A number of Programmed Instruction courses are being offered. As the texts used for Programmed Instruction are not reusable, a flat fee of $5 per Programed Instruction text will be applied. Check or money order must be made payable to Grumman Aerospace Corporation. Programmed Instruction courses may be obtained at the Voluntary Education Office, Plant 39, Bethpage.

The following list of courses being offered by Corporate Training and Development includes title, course number, description of course, section number (if more than one section is being offered), instructor, location and time of class, and starting date. For registration, refer to title, course number, and section (if more than one class offered).

Computer Sciences

Computer Programming - COBOL (FF 00001 - 30 hrs)

Covers the COBOL language and its application to business problems. Topics to be included are: organization of a COBOL program, fundamentals of flow charting, COBOL language structure and usage, review of compiler diagnostic messages, and class problems.

Prerequisite: Introduction to Computer Programming or equivalent.
Bernard Abrams, Room 112, Bethpage H.S., 5-7 p.m., Mon., Feb. 19.

Computer Programming - FORTRAN (FF 00002 - 30 hrs)

Introduces the digital computer and its basic programming concepts utilizing FORTRAN IV, logic, and flow charting. Areas covered include computer applications, limitations, and the functions of its major components. Students will solve selected problems from engineering, applied science, and other fields on high speed electronic computers (IBM 1130).

Prerequisites: College Algebra or equivalent.
Joe Vosefski, Room 110, Bethpage H.S., 5-7 p.m., Tues., Feb. 20.

Computer Programming - FORTRAN (Advanced) (FF 01141 - 30 hrs)

An integrated course covering the applications and limitations of the IBM 1130 computer system with an introduction to the IBM 360/75 system. Real time aspects of selected scientific and management information will be studied. Students will solve simple modeling and optimization problems utilizing the more advanced techniques in FORTRAN programming.

Prerequisites: First year college math and computer programming (FORTRAN) or equivalent.
Joe Vosefski; Room 110, Bethpage H.S., 5-7 p.m., Thurs., Feb. 22.

Computor Programming, Introduction to (FF 00003 - 30 hrs)

Intended for those students who have had little or no exposure to computer programming, and intend to take programming courses devoted to a particular language.
Course includes: philosophies of programming, representation, presentation and transfer of information, problem analysis, program organization, coding and an introduction to FORTRAN, COBOL, and PL/1.
Martin Blyseth, Room 114, Bethpage H.S., 5-7 p.m., Mon., Feb. 19.

Computer Resources Management (FF 01021 - 30 hrs)

A comprehensive course designed to present computer resource information to managers so that they will know the various parameters to consider in their decision processes.
Martin Blyseth, Room 114, Bethpage H.S., 5-7 p.m., Wed., Feb. 21.

Engineering Sciences

Integrated Circuits for Engineers I (FF 00329 - 30 hrs)

Introduction to integrated circuits manufacture and techniques, including their use in logic and computer design, micro-circuit families, and linear circuits. Objectives of the course are to answer such basic questions as: What are ICs? What can they do? What are their limitations? How are they applied in the military and industrial consumer fields?
Additional areas covered will include costs versus results, inputs and outputs, and testing and fault-isolating techniques that can be used without impairing the IC.

Prerequisites: Transistors for Engineers I or II (or equivalent).
Val Sanford, Room 110, Bethpage H.S., 5-7 p.m., Mon., Feb. 19.

Intearated Circuits for Engineers II (FF 01143 - 30 hrs)

The course will provide a review of Design Parameters necessary in selecting IC's for High Frequency Application, such as: Video Amplifiers, IF Amplifiers and Tuned Circuits: Application of IC's for arithmetic functions, converters D to A and A to D, is included.
The objectives of the course will be to acquaint the engineer with the interpretation of various manufacturer IC specifications and assist him in selecting the right IC to do a certain job.
Selected design problems will be taken up in class. Application of IC's to Digital Circuits will be emphasized. Familiarization with problems encountered in the use of IC's and how to cope with these problems is also included. The application of FET, MOS and MOSFET, with concentration on practical aspect, such as Voltage Variable Resistor, completes the course.

Prerequisite: Integrated Circuits I (A brief review of Integrated Circuits I will be conducted if necessary).
Val Sanford, Room 110, Bethpage H.S., 5-7 p.m., Wed., Feb. 21.

Laser Technology (FF 00528 - 26 hrs)

Designed to give engineering personnel an understanding of lasers and laser systems. Lectures on: laser background, types of lasers, nonlinear optics, holography, laser characteristics, laser scanning systems, ancillary system elements.

Prerequisite: Engineering degree.
Ken Leib, Conf. Room 1 & 2, Plant 14, 5-7 p.m., Tues., Feb. 20.

Basic Stress (FF 00708 - 30 hrs)

Grumman employees involved in the preliminary layout of structural components are instructed in the elementary methods of stress analysis. Simple calculations that will allow them to size such structural elements as beams, stringers, shear panels, etc. New employees will be indoctrinated in the analysis of thin gage, lightweight components.

Prerequisite: High school math to Trigonometry.
Oswaldo Lourenso, Room 111, Bethpage H.S., 5-7 p.m., Tues., Feb. 20.

Stress Review for Engineers (FF 00709 - 30 hrs)

The analysis of complicated structural components and assemblies such as bulkheads, fuselages, wings, and related connections. Advanced methods of stress analysis are used employing strain energy, virtual work, elastic centers. These complicated probems are computer oriented and are also analyzed by matrix and computer problems.

Prerequisite: Engineering degree or equivalent.
O. Lourenso, Room 111, Bethpage H.S., 5-7 p.m., Thurs., Feb. 22.

Personal Developm't

Typing, Beginners (FF 00030 - 30 hrs)

For those who desire a skill in typing. Through regular classroom practice and drill, students will acquire the necessary keyboard control essential to good typing techniques.
Bethpage High School Instructor, Room 109, Bethpage H.S., 5-7 p.m., Tues., Feb. 20.

Shorthand, Gregg Refresher (FF 00023 - 30 hrs)

For the individual who wishes to refresh or rebuild skills in shorthand. Provides dictation and transcription practice geared to industrial requirements.
Marjorie Wolfe, Room 112, Bethpage H.S., 5-7 p.m., Tues., Feb. 20.

Secretarial Techniques (FF 01163 - 30 hrs)

This course is designed for the secretary who wishes to update skills. Included in the course will be the typing of business letters, rough drafts, reports, internal communications, use of office reference materials, telephone communications, and general office procedures.
Marjorie Wolfe, Room 106, Bethpage H.S., 5-7 p.m., Wed., Feb. 21.

High School Equivalency (FF 00016 - 60 hrs)

Instruction, review, and preparation for taking the High School Equivalency test.
Areas of concentration: Mathematics, Sciences, English, Social Studies. All applicants pre-tested prior to being admitted to course.

Prerequisite: 18 years of age or older; out of school at least one year.
Howard Brochyus, Room 9, Plant 39, 5-7 p.m., Mon., Feb. 19 (Meets on Mon./Wed.).

Reading Improvement (FF 00020 - 33 hrs)

For the average or above average reader who wishes to read more efficiently. Through systematic classroom exercises, the student will substantially increase his reading speed and comprehension.
George Ballard, Conference Room A, Plant 25, 5-6:30 p.m., Mon., Feb. 19. (Meets on Mon./Wed.).

...beginning January 29

Industrial Writing (FF 01173 - 30 hrs)

This course is designed to make your on-the-job writing easier, yet more communicative. Offered are the mechanics of organization with regard to purpose and readers' needs; outlines of effective writing with regard to preciseness, directness, and emphasis; and formats with regard to reading ease, simplicity, and brevity. These mechanics will be applied to writing in general, but examples of writing to prescribe, to report, and to persuade will also be covered.
William Fleischhauer, Room 113, Bethpage H.S., 5-7 p.m., Tues., Feb. 20.

Effective Technical Presentations (FF 00019 - 30 hrs)

A course to prepare engineering and administrative personel to give brief, coherent, and successful oral presentations. Includes tailoring a presentation to a specific audience, organizing material for most effectiveness, selection and preparation of visual aids, platform techniques. Practice presentations and class critiques.
George Breen, Room 112, Bethpage H.S., 5-7 p.m., Thurs., Feb. 22.

Fundamentals of Trigonometry (FF 01164 - 30 hrs)

A practical study of basic trigonometrtic functions, equations, and identities including degree and radian measure, graphing, and basic logarithms.
Some intermediate algebra will be reviewed in the beginning of the course.
Fred White, Room 3, Plant 6 (Calverton), 4:30-6:30, Thurs., Feb. 22.

Skills Development

Electricity I (FF 00008 - 30 hrs)

This is the first in a series of courses in the Electrical-Electronics Training Program. Practical laboratory experiments are coupled with related theoretical concepts to develop proficiency in circuit fault-isolation of electronics equipment. Circuits are rapidly constructed on vector boards, then tested and analyzed. Subjects covered in this course are: schematic diagram reading, electronics color codes, series and parallel circuits, and Kirchhoff's Laws. Basic electrical test instruments such as volt, ohm, milliammeters, and oscilloscopes are used throughout.
Steve Biesiadecki, Room 4, Plant 39, 5-7 p.m., Tues., Feb. 20.

Electronic Shop Techniques (FF 00307 - 40 hrs)

This course covers the basic skills necessary for an electronic shop assembly and fabrication technician. Included are nomenclature, tooling, material identification, and pertinent specifications used for electronic assembly and fabrication. Attendees perform related practice following demonstrations of methods and techniques by the instructor.
P. Pantelis, Room 3, Plant 39, 5-8 p.m., Wed., Feb. 21.

Electronics I (FF 00010 - 30 hrs)

Power supply circuits and associated electrical-electronics components are the main subjects of this course. Theory of operation and practice is provided on circuits such as: transformer and semiconductor (diodes and zeners) power supplies, solid state logic, half-wave and full-wave supplies, voltage doublers and solid state bridges. Related mathematics is taught, as required, with each experiment. Participants also gain experience in the use of basic shop test instruments.
Steve Biesiadecki, Room 8, Plant 6 (Calverton), Thurs., Feb. 22.

Basic Transistors (FF 01162 - 40 hrs)

Students will receive instruction in basic transistor theory and construction of transistorized circuits. This comprehensive course will include use of various types of instruments and testing equipment such as voltmeters, oscilloscopes, and transistor testers to check circuitry.
Robert Volino, Room 8, Plt. 6 (Calverton), 4:30-7:30 p.m., Mon., Feb. 19.

Introduction to Hydraulics (FF 00039 - 30 hrs)

Covers development of basic hydraulic systems, including basic physics which govern fluids, prints, hydraulic fittings, component and lab work.
Prerequisite: Basic Mathematics.
Elmer Baumgart, Room 7, Plt. 6 (Calverton), 5-7 p.m., Wed., Feb. 21.

Manufacturing Methods II (FF 00043 - 30 hrs)

A continuation of Manufacturing Methods. Will cover: tool order, tool route cards, operation sheets, introduction to the automated system of operation, aircraft lines drawings as related to tooling, configuration.
Prerequisite: Manufacturing Methods I or equivalent.
Pat Bernardo, Room 9, Plant 39, 5-7 p.m., Thurs., Feb. 22.

Home Studies

For those who are unable to take advantage of the Voluntary Education Program after normal working hours, the following Programmed Instruction (P.I.) courses are being made available, in limited numbers. These are self-teaching programs. Certificates are awarded to those who complete the course satisfactorily. (Fee $5 per course).

Pressure & Its Measurement
Methods Improvement and Work Controls
The Secretary - Jill of all Trades
Cutting Office Costs Through Work Simplification
Trigonometry - A Practical Course
The Arithmetic of Computers

Headed back to school

Vice President George Skurlla is headed for Harvard Business School to participate in a 13-week advanced management course for senior executives, starting February 4. Also going to Harvard is Dick Kline, Grumman resident manager for engineering support services at North American, to particapte in a 13-week advanced management course.

Les Quarry

Les Quarry dies; transport head

When people talked about "the garage" or getting a balky car started on premises despite a dead battery or saw the Company's runways clean immediately after a snow storm, in all likelihood they also thought of that always helpful man in the Transportation Department, Les Quarry.

Now Les is dead. It happened on Wednesday, January 17, at the age of 54.

Les had been with the Company since August 2, 1937. There are people who claim he was "the best damn skin-riveter ever," but his mark was made elsewhere, in Plant 20, Grumman's Garage, next to Plant 15. There he reigned as house wit and dispenser of good cheer. A man at home with the casual, relaxed style of one thoroughly at ease, Les made that happen with others. It was a rare gift, one increasingly uncommon in a world of building pressures; and because of that, more important.

A memorial service was held for Les on January 20.

His widow Winifred lives at his residence on Clay Pitts Road, Greenlawn. He is also survived by two daughters, Mrs. Veronica Pigott and Mrs. Nancy Gil, and a grandson, Graham Gill.

Visit from Santa

Jim Carmelitano, who won the "employee of the month" award for December in Administrative Operations, had an unusual experience at Christmastime. But the story really began last fall when Carmelitano helped a motorist hopelessly marooned in front of Jim's home during a severe rain storm. Two nights before Christmas who should show up at the door but that same motorist—this time dressed as Santa—with toys for Jim's two youngsters. In real life, Santa is a local bartender who saves his tips during the year to buy toys for kids at Christmastime. You could say he spreads the holiday spirit in a number of ways.

He's educated on eye safety

Last October, Friday the 13th, might have been an ill-starred day for many. It could have been disastrous for Al McCaffrey; he might have lost an eye.

Early that morning, Al was drilling rivet holes in an EA-6B fuselage being assembled at Calverton when his cobalt drill broke. The drill bit struck the right lens of his plano safety glasses, immediately shattering the lens.

"I didn't even know what had happened," recalls Al. "It felt like a big rubber band snapping me in the face."

Firing straight at his right eye, the ¾ inch drill bit had been blocked by the safety lens. Al's eye was undamaged.

"I realized that two little cube-like pieces of glass were missing from my shattered lens. Thinking they were in my eye, I panicked for a second. Luckily, they had fallen into my shirt pocket."

This was not the first time Al came close to damaging his eye. Ten years ago, when Al started with Grumman, while he was performing the same type task, a small shaving of metal had flown into his eye. He was not wearing safety glasses at that time, and an eye surgeon was needed to remove the particle. "That was my education in eye safety," says Al. "Many workers are bothered by the glasses; they claim the glasses fog up. I wouldn't be caught without them."

Al McCaffrey

Big winner

Nineteen seventy-two was Al's lucky year; this past summer he won $10,000 in the N.Y. Summer Lottery. "To win that much money and to be wearing safety glasses at the right time," explains the Wise Owl member, "has got to be lucky."

In his spare time, Al builds and maintains stock cars. His lattest entry in the Islip stock car races is a modified Camaro. Over the past three years, the auto has won two races and placed in several. Al will be able to continue his hobby—with 20/20 vision.

For Rent

SKI HOUSE: Walk to slopes at "Big Vanilla at Davos", avail. Sun. evgs. - Fri. after. HA 7-7344.

HOUSE: Pocono Mts., 2 bdrm., bath, kit., dng. rm., lvg. rm., approx. 40 min. drive to Camelback & other ski areas. Reasonable rates. After 6 p.m. LI 5-177.

ROOM: Furnished, Bethpage, pri. entrance, semi-pvt. bath, close to Grumman plts. & shop centr. 822-3819.

APT.: Hauppauge, LIE #56, 5½ lge. rooms, eat-in-kit., 24' lg. rm., dng. rm.; family room, 2 lge. bedrm., s/d #6, dead end street. $275 per mo., avail. 2-1-73. 234-6590.

APART.: Mother-daughter, upstairs, 2 bedrm., downstairs 3 bedrm. W. Babylon. 731-4487.

APT.: 3-rm., Forest Hills, near subway, near LIE and Grand Central Pkwy., gas & elec., convenient to all shop. ctr. $199 mo. 212-793-6540.

APT.: Full kit., all utilities, priv. entr., 2 mi. from Grumman. PY 6-5085.

ROOM: Furnished studio, w/refrig., pvt. entrance, $125 mo. 735-0602.

ROOM: Near Plt. 30, pvt. entrance. WE 5-7336.

STUDIO APT.: Furn. for busines woman, priv. entr., bath, hot plate & refrig., inc. util., nr. Grumman, $150/mo. 735-8268.

ROOM: Furn., with kitch. priv., 1 mi. so. of Grumman. PY 6-4210.

ROOM: Newly decor., priv. bath, nr. Grumman. 796-8106, after 5 p.m.

HOUSE: East Islip, near Heckscher, 3 bdrm., furn., 5-6 mos., inc. oil, $300/mo. S. Campbell, Ext. 9431.

HOUSE: Farmingdale, 3 bdrm., ranch, unfurn. or furn., garg. 694-1090.

APT: Little Neck, 2 bdrm., terrace, all appl., bkyd. w/playgrd., pool, tennis ct, take over lease as of Feb. 19. (212) 428-7806.

HOUSE: Florida, Sanibel Island, new gulf front condominium, furnished & fully equip., 1 bedrm. apt., central a/c, heat, heated pool, adults, no pets, minimum 2 wks, famous shelling, fishing & boating area, golf course on island. SU 1-0495.

STUDIO APT.: new, for 1 person or couple, 10 min. from Grumman. After 5 p.m. 587-5238.

STUDIO RM.: N. Baldwin, bsmt., near S.S. Pkway., refrig. Evgs. 378-2257.

HOUSE: Massapequa Pk., split level, 4 bdrm., fully furn., fen. yard, fin. bsmt., 8 mi. from work, short term lease. (213) 541-5131.

APT.: East Meadow, 6 rms., use of gar., storage rm., outside yd., chil. & pets allow., util. incl. $330. 735-2444.

Wanted

WASHER: Westinghouse front loader, 16 lb., heavy duty. 751-9571.

OARS: For dinghy. After 5 p.m., Jim 567-3591.

MOTOR: '70 outboard, Johnson, 9½ hp. PE 1-7008.

TRAINS: Old. Elec., Lionel, Ives, or Amer. Flyer, small or lge. sets, pay cash. JU 4-6771.

APT.: Unfurnished, 3-4 rooms, Commack-Smithtown area, occupancy anytime, $180. Evgs. 864-4472.

MODEL AIRPLANE: Engines, kits, magazines, pre-1950 Vintage. MA 6-2825.

COMPANION: Female traveling to accompany female to St. Marteen during March. After 6 p.m. WE 1-0671.

APT.: For newlyweds, full kit.; any size OK. Mar. 1. WE 8-3417.

SHOP MANUAL: '64 Pontiac. 864-7658.

APT.: Newlyweds, for end of March, West Islip - Bay Shore vic., reasonable rent. MO 5-6262.

STABLE SPACE: With corral for one horse, close to Brentwood, reasonable. 273-4335.

BAR-BELLS: Steel wgts., condition not important, reasonable. SU 5-8623.

HOUSE: One fam., 2 bdrm, 4 or 5 rooms, Nassau or Western Suffolk. 586-0438.

ROOMMATE: Female, to share house with elderly woman, busi. pref., terms to be arrang. 226-4959.

ROOMMATE: Woman to share apt. with mature young woman. 822-6356.

Car Pool

SAYVILLE: To form or join to Pl. 25. 8:12 a.m. to 4:42 p.m. 567-3567.

Ride Wanted

ISLIP: Between Plant 1 and Vivian Blvd. 7 p.m. to 3:30 a.m. 277-4596.

COPIAGUE: To Plant 3, 7:30 to 4:00, will pay. 842-0591.

ST. JAMES: Smithtown area to Plt. 2, 3, 1, 7:30 a.m. to 4 p.m. $5.00/week. 862-9099.

EAST ISLIP: To Syosset, Plt. 34, 8 a.m. to 4:30. JU 1-3584

LIDO BEACH: Point Lookout to Long Beach. Plt. 5 or 14, 8 a.m. to 4:30. 431-8077.

For Sale

VEGA: '71 Coupe, auto. trains., AM/FM rdo., Ask. $1600. 589-0619.

MAVERICK: '70, 6 cyl., auto., a/c, snow tires, 2 spares, w/w, r/h, $1250., blue. WE 8-5389.

BDRM. FURN.: Colonial, dresser w/mirror & chest of drawers, $90; Kingsize Colonial headbd. $15. 822-1088.

at your SERVICE

This is a free service to Grumman personnel for non-commercial advertisements, accepted on a first-come, first-served basis. Classified advertisements are carried in PLANE NEWS only on the basis that everyone replying to such advertising will receive fair and equal consideration regardless of their race, creed, color, or national origin.

Type or print ad on form available at Employees Service and Engineering counters, and send via interplant mail to PLANE NEWS, Plant 5, Bethpage. List home phone (with area code if outside Nassau or Suffolk). Limit: one ad per person per issue. No item under $10, no firearms or ammunition.

MOBILE HOME: '72 Pathfinder, 26', self-cont., 3 sep. rooms. $4000. Evgs. 929-8556.

HOUSE: Port Jeff. Sta., 4 bedrm., hi-ranch, 1½ bath, 2 car gar., eat-in-kit., dng. rm., w/w drapes, 1/3 acre treed, den. $29,990. 928-1071.

MISC.: Formica counter top, "L" shape, 6½x6-5, back splash-plywod back, $15; s.s. sink & faucet. 25 x 12, $10; 2 Chevy 14" rims, $6 /pr. After 5 p.m. PY 9-5636.

HOSPITAL BED: Maple hd. & ft. board, non-elec. $50. MO 5-6642.

CRIB: Full size w/ mattress, and carriage (coach) w/mattress. $25 for both. WE 8-5389.

ICE SKATES: Men's hockey skates, size 10, canadian flyer. Ask. $10. PE 5-8673.

GAS RANGE: Maytag, needs no repairs, white. $50. 775-0796.

T-BIRD: '56, continenntal wheel. Evgs. 735-6468.

TV: RCA color, 17", swivel console. $125. FR 4-2922.

CAMPMOBILE: '71 Volks., 18,000 mi., sleeps 5, w/ poptop, ice box, sink with self-cont. water supply & external 110V electrical hook up, ex. $2,000. AN 1-3570.

BOAT: 16', runabout, wood/fbgls., solid construction, front hatch, steering & control cables, lights. $200. 261-0709.

VW: '66 Beetle, orig. owner. $475. After 5 p.m. AN 5-5118.

FLOOR WAXER: Commercial 17", comp. w/all attach. $125. 234-1923.

VW: '65, 53 hp, Bosch kit, oil temp. & press. gages, new tires and interior, '67 seats. JU 1-3125.

FURN.: Two Danish sofas. 12x14 rug. lamp, $50; Q-size bed, $55; baby crib, etc. (212) 428-7806.

MISC.: Women's 5' skis cubco bindings; poles, 6½; boot. $25; men's 6'8" skis, cubco bindings, Hanke buckle boots, size 9 & poles. $50. MO 9-2892.

PROPERTY: Delhi, New York, 15-acres, 300-ft. front on Delaware River, wooded land w/valley view, walk. to golf, mail & school bus routes. Terms avail. After 6 p.m. MO 1-3868.

VW CAMPER: '68, pop up top, mtd. snow tires, butane tank & stove, VW tent incl. LT 9-3461.

CHEVY: '64 Impala, 4-dr., hdtop, pwr. steer, 8 cyl, r/h, auto. trans., 433-9221.

CHEVY.: '67 Impala. conv., auto trans., pwr. steer., V-8 eng., extras, 71,000 mi., $695. 757-7112.

HOUSE: Bethpage, 11 rooms, central a/c, w/w, s/s, d/w, w/d, 1½ baths, gar., ¼ acre, prof. lndscpd., fenced, o.h.w. $55,000. 938-6140.

HOSPITAL BED: All power, 6 pos. PO 7-6308.

DRYER: Sears Gas, used 1 yr., vent, Lady Kenmore. $125. 698-4529.

TORINO: '69 GT, 2 dr. hdtop, fast back, 390 V8 auto trans., all power, w/w radio, steel wheels, dk. blue. $1,500. 567-4285.

FUR COAT: Black Persian Lamb, grey mink trim, size 18, full length, worn 1 winter. SU 1-0495.

FORD: '66 Fairlane wagon, 8 pass., 4-dr., auto., p/s, r/h, new tires, mounted snows. $300. 261-0709.

MISC.: Stroller, tricycle, car seat, crib. AN 6-6877.

DOG: Old English Shepherd, AKC, fem., 3 yrs., best offer. 293-8861.

HOUSE: Commack, col., brick & wood cedar front, 8 rooms, 4 bdrm., large eat-in-kit., 2½ baths, 2 car. gar., lge. patio, full bsmt., ¼ puse acre, fully lndscpd., w/w, s/s, bsbd. heating, appls., exec. condition. $44,000. 543-0895.

LAND: ½ acre lots in Rio Rancho Estates, Albuquerque, New Mexico (units 13 & 22). 589-4856.

MISC.: Eico 70 watt stereo amplifier, $80; stand. FM stereo tuner, $60; two (2) antique rope beds, $50 ea. After 4 p.m. HA 1-5762.

REFRIG./FREEZ.: Frigidaire 1973 mod., 62" x 30" x 29", white, frost-free, separate refrig. & freez. controls. $220. 541-5506.

VW: '71 Sqback., Std., am/fm radio, 25,000 mi. LT 9-9244.

VW: '64 Bug, '68 engine, am/fm radio, tape deck, new clutch, clutch cable, throwout bearing, muffler, recently tuned. Ask. $595. PY 1-6680.

HOUSE: Selden, 3 bedrm., 1½ bath, paneled den, half-bsmt., lge. kit., dng. area, w/w carpet, appl., fenced, extras, nice lndscp. $29,500. After 6 p.m. 732-5954.

OLDS: '68, 4-dr. sed., gold, fac. air., rear refr., tilt & tele, steer wheel, 4 new tires, extras. $1100. 433-5170.

VW: Super Beetle, '71, marine Blue, snows, am/fm stro radio, snows stick shift. $1600. Between 5 & 6 p.m. 433-452.

PUPPIES: German Shep. AKC, lge. boned, import., champ bred sire & dam w/obedience titles, pup shots, fully guar. 732-3552.

HOUSE: Strathmore East, 4 yr. L-shape ranch, 3 bdrm., 2 bath, lvg. room, fireplace, dng. rm., lge. kit., break. area, appl., w/w, s/s. patio, 1/3 acre, fenced, 2 car gar. $36,500. 473-0889.

HONDA: '72 450, 6" extended fork, custom seat, Z bars. $11,000. 486-0052.

For Sale

HOUSE: Islip Village, 3 bdrm. ranch, treed half-acre, Bayberry Point, mod. kit., appli., lge. lvg. rm., dng. area, den w/ fireplace, lge. playroom w/ panelled cathedral ceiling, deck, two full baths, fully lndscpd, ex., schools. $45,000. 581-0333.

TOYOTA: Sprinter, '69, 2-dr., yellow & blk., r/h. Ask. $1,100. Weekends 826-3400 or 826-3422.

MISC.: 2 professional chair hair dryers (both need work), $30 ea.; upright piano (well tuned), $25. HA 7-6148.

HOUSE: Farmingdale, 4 bdrm, L-shaped, ¼ acre, s/s baseboard, o.h.w., heating, lndscpd., gar., near L.I.E. Call morn. 732-8733.

HOUSE: W. Farmingdale, 7 rm. brick cape, ½ dormer, fireplace, hdwood floors down, paneled dng rm., new s/s, finished bsmt., laundry room, screened patio, detached brick garage, o.h., 11 a.m-3 p.m./6-7 p.m. 249-0922.

BOAT: Dinghy, fbgls. bottom, 8', 3 H/P Johnson outbd. motor, w/ extras. $100. after 5 p.m. 935-1456.

For Sale

BUICK: '67 Grans sport, '68, 400 cu. eng., holly 4 barrel, Mickey Tomson's w/ crager's 1 mt. olo, hurst 4 spd.. p/s, r/r, gold convert. $650. Ext. 9385.

PLYMOUTH: '71 Duster, bronze/blk. vinyl top, p/s, 19,900 mi. $1500. 486-0131.

HOUSE: Wantagh, 8 rm. split-level, 3 bdrm., 2 bath, gar., patio, all appl., a/c, many extras. PE 5-9835.

PONTIAC: '70 Firebird, formula 400, a/c. all power, am/fm stereo radio, air shocks, wide ovals, mags, new snows. $2590. 681-4249.

PONTIAC: Wagon, 9 pass., auto. trans., all power, snows. $1200. AN 1-2985.

HOUSE: N. Babylon, 3 bdrm., split ranch, fin. playroom, w /fireplace, bar, 2 car gar., patio, bar-b-q. $29,000. 724-5642.

RENAULT: '69, r/h, 4 spd. trans. $650. After 5 p.m. 884-3776.

DNG. SET: Cherrywood, 44" round table, 2 10" leaves and pads, 4 chairs, 44" hutch, $225; sectional furn. w/ slip covers & 2 end tables, $150. 261-8128.

CAR HEATER: South Wind gas., all controls & install. manual. $25. 261-2475.

PONY & CART: $100. 862-8026.

LADDER: 40" alum. ext. in two 20' sections, max. working length 36'. $50. 727-8880.

COFFIN: Stage prop., 7', lined. Best offer. AN 5-9508.

BOSTON TERRIER: Female, 7 mo., AKC, shots. Reasonable. PE 1-4815.

POINTER: German short haired, 6 mo., appl. for regis., made out not submitted. $25. LT 9-8201.

ROD & REEL: Surf., 11' 6", fbgls., with luxor mer. No. 3, spinning reel, used twice. $50. 864-1252.

SNOW THROWER: Snow King, 26", 7 h.p., elect. start, 4 fwd. speeds & reverse, pneumatic tires & chains, $200. 751-1086.

WHEELS & TIRES: Datsun 500, Goodyear poly. snows, Toyo. w/w. $60. Evgs. 757-5580.

HOUSE: N. Merrick, Cape Cod, 4 bdrm. 2 baths, 75x100, fenced. $35,000. After 6 p.m. 587-1652.

MISC.: 19" Admiral, b/w T.V., $25; ladies golf shoes, size 6 M. HA 3-8731.

BABY CARR.: English coach, $25. WE 8-8755.

MISC.: 50" x 50" radiant proj. screen, $10; 14" wheel rims, $10; National Geographic Mag. '63-'66, 70-'72, $10; 14 vol. medical & health ency., $30; 550 U.S. first day covers (stamps), $120. 724-0409.

CYCLE: '69 Kawasaki, 500 cc, MKIII, full chopp., 10" extend. springer front end, king-queen seat sissy bar & easy rider bars. After 5 p.m. 981-1686.

STEREO: G.E. console, am/fm tuner, record stor. Best offer over $150. After 6 p.m. MO 7-2557.

BOAT: 14 ft. w/ 18 hp Evinrude motor & cox trail. $395. 724-4149.

MERCURY: '68 Cyclone GT, 2 dr. hdtop, 302 4V eng., new trans., valve job, pwr. steer., buckets, console, select-shift auto trans., alarm, snows. $895. (212) 258-1425.

OLDS: Toronado '68, low mil., all extras, orig. owner. $1725. 368-2812.

SKIS: Head 720's, Cubco bndgs. $85. 666-5674.

CHEV.: '66 Conv., all power, fbgls. belted tires. new brakes. $500. LT 9-1496.

HOUSE: Solid brick high ranch, mother?dgt., 2 fam., detached over. gar., 6 upper rooms, 5 low. rooms, 2 baths, fenced, con. to shop. ctr. $43,000. Principals only. CH 9-4392.

GAS TANKS: Two 12 gal. cap. outbd. Ask $20 ea. 584-7348.

BENCH GRINDER: Sears ¼ hp w/two ¾ in. wheels, small drill press w/without motor. Both $45. Evgs. 742-1906.

MOBILE HOME: '68 Detroiter, 12x64, 1½ baths, 3 bdrm, carpet, Eastport. After 6 p.m. 669-0156.

HOUSE: Amityville, 2 bdrm., col., 1½ bath, firepl., dbl. gar., full bsmt., new furnace. $30,500. 264-0872.

HOUSE: N. Syosset Cape Cod, non-develop., expand. attic, encl. breezway, gar., 2 baths, 4 bdrms., firepl., lvg. room, dng. area, eat-in-kit., 25 yrs old, 75x240 ft.. treed plot. $48,000. LR 5-2874.

MISC.: 12 in. non-tilt table saw adap. for cut. firewood, $30; elec. mixer w/bowls & juic., $10; movie 4 light bar, $10; ladies bowl ball w/bag, $18; ladies size 7 white fig. ice skates, $10; reel type power mower w/aerator attach., $20; ladder jacks w/plank, $10; others. Reasonable. 751-3814.

For Sale

FORD: '68 LTD Station Wagon, 10 pass., all power, a.m.-f.m. stereo, 5 speak. sys., extras. $1400. GE 3-1973.

DODGE. '71 Dart Swinger, bronze, 2-dr. hdtop., R & H, 3 speed stand., 2 new tires, new clutch & muff., 45,000 mi. Ask $1850. 751-1327.

VW: '59 Karman Ghia, recent inspection & tune-up, economical trans. $200. LT 9-5424.

CORVETTE: '58 with '66 327 engine, 30,000 on motor, 3 spd. rebuilt hurst trans., posi-rear 30:31, 2 tops, stereo, tires /2 snows black in & out, 300 HP, R & H. $1,000. 691-6939.

PONTIAC: '72 Le Mans sport, 350 eng., turbo hydra., console bkt. seats, pwr. steer., AM radio, FM cassette stereo w/speakers, brazilia gold w/ beige vinyl top & saddle int., 13,000 mi., snow tires, ask $3,000 or best offer. (212) 293-1729.

24 OZ: '71, chrome wheels, air, bumper guards, alarm system, radials, 19,000 mi. $3,850. 293-0753.

IMPALA: '73, 9 pass. wagon, all power, 400 eng., rer speakers, roof rack. 791-4594.

GAMEFISHER: '72 Sears, 12', 7½ H.P. engine, gas tank, hoses, oars, life jack. (2), anchor; car top roof racks, all used one season. $600. After 6 p.m. 234-7134.

CHAIR: Modern lvg. room, Kroehler, lge. stuffed arms, blue green. $35. AN 5-4998.

STEREO COMPONENTS: Fischer, 50W amp. with separate preamp., Rekocut table with 16" shure arm and cartridge, two Fischer 55 PS, PKR Systems. $155. AN 1-2612.

HOUSE: Plainview, split level, 7 rms., 1½ baths, fin. basement, laundry & stge. rooms, plot 60 x 100. By appt. only, after 5 & wknds. WE 5-5973.

ORGAN: Wurlitzer model 1460, many options, early Amer. cabinet. $995. 878-1912.

FISH TANK: 10 gal. incl. nat. rock lndscpd., 6 lb. gravel, lg. supreme pump, tubes, clean. & filt. access., reflect. hood, $10. 669-2339.

BABY FURN.: Crib, matt., dress., $35; carriage, $20; dress. tbl.; bassinet. 567-0860.

MISC.: Dog house, insul., for med. lg. dog, $30; 3 ft. x 100 ft. fence wire, $25; 7½ ft. sofa, $75; 4 wood chrs., $20. 588-6364.

HOUSE: Levitt ranch. No. Wantagh, entr., foyer, laund. rm., 3 bdrms., 2 baths, den, gar., $36,000. 796-4587.

HOUSE: Hauppauge, 7 rm. ranch, ½ acre, 3 bdrms., 2 baths, den w/firepl., 2 car gar., pool, xtras, $45,000. 234-5301.

BIKE: Girl's Schwinn 24 in., $25. AT 6-8062.

HOUSE: Farmingdale ranch, ¼ acre, 3 bdrms., 2 baths, powdr. rm., 24 ft. liv. rm. din. rm. w/ firepl., w/w, slate foyer, lndscpd., patio, fenced. CH 9-2873.

MISC.: Child's spring hobby horse, deluxe fire eng., child's wh. col. rocker, metal tbl. & chrs., infant's car bed, women's size 7 ice skates. 724-0573.

PERSONALS

The family of the late Sidney H. Palmer of Plant 2 wish to express their gratitude for the kind expressions of sympathy from all his friends at Grumman.

OBITUARIES

Plane News has received word that death has come to the Grumman personnel listed below. We extend sincere sympathy to relatives and friends.

JOHN W. HOUSER of Sub-Assembly Department, Plant 77 at Stuart, Fla., died January 8 at the age of 52. He lived at 19 Sunny Acres Rd., Jensen Beach, and had been with Grumman since 1965.

JOHN J. DIFFLEY JR. of Flight Avionics, Plant 6, died January 18 at the age of 44. He had been with Grumman more than 20 years and lived at 28 Mahogany Rd., Rocky Point.

ANDREW JOHNSON JR. of Project Administration, Plant 34, died January 19 at the age of 31. He had been with the Company since 1965 and lived at 202 Rushmore St., Westbury.

For Sale

HAM GEAR: Heath HW-16 CW transmitter & receiver, spkr., crystals, $90. 751-1256.

HOUSE: Bethpage, colonial, 4 bdrm., 2½ baths, eat-in kitch., 15x24 fam. rm. w/firepl., 2 car gar., s/s, 6x9 stor. shed, $48,500. WE 5-1988.

DISHWASHER: Westinghouse, port. convert., w/wood top, SC295L, white, $100. IV 6-4930.

CHAIR: Recliner, brown, vinyl, $50. 667-5599.

HOUSE: Garden City So., Tudor cape, 8 rm., 5 bdrm., 2 baths, basemt., gar., slate roof, firepl., eat-in kitch., formal din. rm., carpets, drapes, wash., dry., 3 air cond., mid $40's. 293-8343.

RADIO: C.B. Sonar FS23, 12 v/110v w/turner desk mike, and Johnson matchbox. LT 9-3034.

SAX: Tenor, Conn pro, $195. AN 5-9508.

HOUSE: Old Bethpage, 3 bdrm., ranch, brick, 60x100, finn. basemt. w/wetbar, 2-zone oil h.w.h., thermopane wndws., w/w, lndscpd., dish. wash., wash./ dry., central. located, 1 blk. to shop., $41,000. 694-7255.

SHOPSMITH: All attach., on stand, $100. 731-1386.

PIANO: Baldwin, never used, $595. PO 7-1654.

LATHE: Craftsman wood w/chisels and 2 face plates, $65. MI 3-8198, after 6 p.m.

GOWNS: Brides maids, four plus flower girls, one, for spring-summer, blue nylon dotted swiss w/wh. picture hats to match, $100. 864-6434.

CAMERAS: Canon FT-B w/35mm f2.0, 5mm fl-4, 100mm f2.8 & 200mm f4.0, all fd lenses, $550; Pentax 6x7, w/55mm f3.5, 105mm f2-4, 150 mm f2.8 & 200m f4.0, all SMC 6x7 Takumars, $1,200; Graflex XL outfit w/80mm f2-8 Planar, $375. 212-923-8509, evngs.

DIN. RM. SET: Drexel, champagne color, contemp., 7 pcs., inc. 3 tbl. leaves, & tbl. pads, $350. 781-6620, after 6 p.m.

BOAT: 39 ft Lobsterman, s/s, depthfind., head, hyd. hauler, twin screw, 135 hp. ea. diesel pwr., teak deck, immac. 864-7165.

MISC.: Hockey ice skates, size 7; HO slot cars, 50 ft. trk. & access., board, $20; Barbie, Ken, Midge, Skipper dolls, w/clothes & access., trunk, cases, $10. LO 1-7914.

HOUSE: 200-yr. old colon., in hist. Wading River on wetlnds., 4 mi. from Peconic, 1.6 acres surrnd. by nature conserv., near beach, barn, low taxes, $55,000. 929-4683.

FLOOR WAXER: Sears, Kenmore, 2 brush. $10. 938-6140.

POODLE: Male, white, good health. After 5 p.m. OV 1-1629.

PUPPIES: Collies, AKC, all shots, wormed, trained, two (2) left. $75 ea. 368-0570.

CADILLAC: '66 Fleetwood, air cond., fully equip. $995. Evgs. WE 8-2223.

CAMPER: '69 Vasta pickup, 10 ½ ft., sleeps six, self-contained front shocks, tie downs. Ask $975. After 5 p.m. 226-7504.

PUPPIES: German shepherd, AKC, lge. boned, import., champ. bred sire & dam. w/ obedience titles, pup shots, fully guar. 732-3552.

HOUSE: Massapequa-Plainedge, 3 bdrm. ranch, fin. bse, 1½ baths, att. gar., paneling, w/w, air cond., swim pool, fenced in ¼ acre, convenient location, low taxes, many appliances. $36,900. 799-1360.

SKIS: Head std., 180 CM, Cupko bindings, size 6 ladies, lace boots. $65. After 6, 724-2465.

TAPE DECK: Car 8 track stereo, Inland Dynatronics, 2-3x5 ½ cleartone spk., sampler tape, manual track cang., $35. 248-0777.

TIRES: Snow, two 7.00-13 mounted on 5 bolt Chev. wheels, two 7.75 - 14 mounted on 4 bolt Mus. wheels, both Goodyear, used approx. 5000 mi. Best offer. AN 1-8123.

RAMBLER: '61 American, stand. trans., 6 cyl., 4 dr. After 5 p.m. (212) GE 8-1337.

HOUSE & FURN.: Centereach, owner moving, 9 yr. old,7 rooms, 2 baths, large plot. 473-5142.

BOAT: 18', all fbgl., sleeps 2 w/ trailer, 60 HP. $1800. 473-5142.

CADILLAC: '71, 2 dr., Calais hdtop, gold, low mile., incl. one pair snow tires & wheels. After 6 p.m. 261-4238.

CAMERA EQUIP.: Linhof 4x5 super Technika, triple ext. bellows, univ. back.. fr. & bk. swings, tilts, rangefind., graphic view find.; Schneider Xenar lens, 150 mm, f4.5, Compur M-X shutter, 1/400 sec., sync. to rangefind; 12-4x5 dbl. cut film hold, 3 grafmatic cut filmhold., 1-4x5 Polaroid film hold, carry case, instruct., $300; 1 Goerz golden Dagor lens, 8.25 in., f6.8 in. Compur M-X shutter mount. on lens board, not sync. must be focused on ground, glass, $185. 586-0757.

CRIB: w/matt. and match. chest. $50. 694-5622.

For Sale

HONDA: '70 ½, mini-trail, mod. Z-50, 3 spd. fr. & rr shocks, lghts, directionals, folding handlebars, inspected & licensed '72, new cond. evgs. RO 4-0965.

TRAIL BIKE: '72 Heathkit, 5 hp, 2 spd. trans., can be used in snow with skis. $120; Cubco bindings, adult 2 pr. @ $8.00 per pair. LI 1-8590.

BOAT TRAILER: '65 Sears-Yarborough, tilt bed capacity: 1100 lbs., 17 ft. Ask $100. (212) 846-6518.

MISC.: '65 GMC Handy Van, new king pins, tran. seals, Parkwar windows, $550; Boat 15', fbgls. & trailer, 40 HP eng. $450.

SLIDE PROJECTOR: Access., for 2x2 slides, mfg.-air equipt. Evgs. 914-235-9894.

MISC.: '64 Grady white 20' cruiser, '67 H.P. Johnson, '70 Tandem wheel cox trailer, many extras, good package deal. 842-5906.

HOUSE: Farmingdale, colonial, 3 bdrm., eat-in-kit., full dlng. rm., front heated s/porch, OHW basebd. heat, screened b/patio, fin., bsmt., gar., near trans., school dis. 22, low taxes. After 4 p.m. CH 9-9313. $34,500.

POOL TABLE: 4 x 8 reg. table with equip. $35. 475-1495.

VW: '63, 1500 sq. back sta. wg. engine rebuilt in '70, recently replaced muff., batt., snow tires. Ask. $300. Evgs. 585-0295.

TAPES: 2 new 8-trk., "Concert for Bangladesh". $10. 249-5663.

YASHICA: 35 MM range finder camera, 1.7 lens, w/ case & instruction man. $50. After 5 p.m. 277-2319.

HONDA: '72, 500 four, 5500 mi., back rest. lugg. rack, highway pegs. $1100. 212-275-7720.

RAMBLER: '63 American. HA 1-2083.

HOUSE: W. Sayville, 3 bdrm., bi-level, fully carpet., s/s, 27' playroom, 20' sundeck, 40' patio, 1½ baths, washer/dryer, dishwasher, double gar. $36,500. 567-1193.

DRYER: Westinghouse, heavy duty, elec., never used. $100. 249-4382.

HOUSE: Miller Place, 4 bdrm. ranch, w/baths (2), family room with fireplace, full base, all appl., 1.15 acres, near Calverton. 473-6357.

VW: '69 Bug, green w/ white int., rear window defrost., rdo., heat., auto-stickshift trans. $950. After 5 p.m. 666-0979.

TV: Color, 5 yrs. old. Sears, 18". $25. 289-4863.

MISC.: Snow tires, (2) 7.15x15 Gurdian, (1) new. $35; 2 unfin. wood folding screens, 3 pnls. ea. 13x72 x 17 x 72, $10 & $12; ski boots, dbl. lace, 11 MW Molata, $10. 757-5755.

HOUSE: Lake Grove, 4 bedr. colonial, 24' true center hall, 2½ baths, laund., 2 car gar., fenced, patio, wooded & landscpd., app., 1/3 acre, full bsmt., shades, s/s. $47,500. 588-6366.

RENAULT WAGON: '69, front wheel drive, 8 track AM-FM stereo. $800. HR 2-0923.

SKI EQUIP.: Grnd Prix skis w/ Cubco bindings, alum. poles, ricker leather sealed-sole ladies boots, size 7½ w/ boot carrier. $95 complete. 212-674-6810.

CYLINDER HEADS: Pontiac "389", 4 B/L, surface ground, new springs, com. rebuilt w/ chrome valve covers. $35 or best offer. AN 5-9508.

PLYMOUTH: '65 Fury II, 2-dr. hdtp., V-8 eng., auto trans., pwr. steer., R/H. $450. (212) 428-7806.

MUSTANG: '69 Mach I, all power, auto-trans., 12,500 mi. $2,000. After 5 p.m. 281-6435.

BUICK: '68 LeSabre, 4 dr. hd. tp., auto, p.s., vinyl top, 50,000 mi. $1100. MO 5-3129.

CHEV.: '68 Nova, 350 SS, buck. seats, 3 spd. floor, vinyl top, low mi. $1295. 549-5332.

VW: '63, light green, good tires, new starter & gas tank. $100. After 6 p.m. 543-7692.

DODGE: '64 Dart GT, conv., power steer., small V-8 eng, needs body work. $125 or best offer. After 5 p.m. 931-2374.

TOYOTA: '71 Celica, low mileage, w/b int., 4 spd., 108 HP, radials. 473-1927.

PLYMOUTH: '72 Roadrunner, 400 c.i., 4 spd., 355, fac. posi-traction, bucket seats. $2600. MO 9-4278.

PLYMOUTH: '71 Cricket, R/H, low mileage, green, 4 dr. $1200. 751-1523.

CHEST: Lane, 48", cedar lined, oak finish ext. $40. 587-0330.

PROPERTY: East Quogue, 4/5 acre, wooded. loc. in Bay Estates, south of Montauk High. $11,000. After 5 p.m. RA 8-1159.

CUSTOMIZING EQUIP.: Custom rear panel for Corvette 3 hor. slots on each side with lenses. After 6 p.m. 212-438-1337.

VEGA: '71 green, 2 dr., radio. $1275. 289-4863.

For Sale

VW: '68 squareback, R/H, Mag wheels, custom 1970 eng. and Trans., mech. perf. Ask $900. Evgs. 289-1776.

RAMBLER: '61 American, conv., white, pwr. steer., auto trans., r/h, 3 extra wheels. $125. ED 4-1575.

TRIUMPH: TR-6, '70, w/HT, lug. rack, AM/FM radio, blue. $2195. 667-4599.

PUPPIES: St. Bernard, AKC regis., champ. bloodline, male & female. MA 6-2825.

TV: Dumont B/W, 23" console, early amer., pix tube 1 yr., $30; Zenith B/W, 21" tbl. model, power transformer, $30. 543-2423.

DRUMS: Kent, blue spark. fin., bass, snare, 2 tom-toms, cymbals, high hat, stool, ask. $175. PY 6-4933.

CHEVY: '55, 4 dr., 4 new tires, new brks., carb., ft. end, rear shks., eng. nds. work, body ok, $125. 541-2833.

INTRUDER ALARM: 3M Ultrasonic, 300 sq. ft. view, walnut cabint., 6½x5x3 in., xtra alarm horn in/ outdor mtg., $80. E. Manaker, Ext. 3513.

TIRES: Snow, (2) 775x15 mount. on Rambler rims, $20. 249-4067.

HOUSE: North Massapequa, col. split, four bdrm.,, liv. rm., din. rm., fam. rm., 1½ bath, lg. kitch., walk to schools, easy access to So. State Pkwy., gar., 75x100, $42,500. MY 4-6044.

DRAFT. TBL.: 60 x 38 w/straight edge, swing arm, lamp, stool, $110; 2 snow tires on rims, G78x15, w/w, $50. 724-9011.

CHINA CLOSET: Antique Eng. oak, mirror, bk., decor. piece, $225. 757-2406.

SKYLARK: '68 Buick, auto., fact. air, p.s., p.b., w/w, snows, R&H, 15-18 mpg. $1,350. 981-2829.

VW: '70 tan bug, nenw tires & muff., ski rack, $1,250. 728-2772, evgs.

STEREO: Bradford rec. player, 2 spkr., $20; Aurora racing set, 22 straight, 16 curves, 3 cars, transform., hand contr., $40. AN 1-0299.

FIAT: '71, sedan, blue, 17,000 mi., 35 mpg., stereo tape, $800. WE 1-6951.

CAMPER: '67 Hilltop, sink, ice box, stove, heater, spare tr., butane tank, sleeps 6, $450. 691-3452.

SKI COAT: Man's large, new 100% down filled, red soft nylon shell, w/tuck-away down filled hood. Ask. $50. 481-1944.

VW BUS: '69, mounted snows, rebuilt eng., 36,500 mi. $1,500. 587-1099.

VW BUG: '63. new brakes, rebuilt front end, snow tires, econom. transp. $200. 653-4587.

PONTIAC: '71 Firebird Esprit, stereo tape deck, auto., bket sts., console, bronze with white int. $2300. JU 8-4715, after 6 p.m.

MISC.: 1 pr. ice skates, sizes 3-4, leather shoes; 1 pr. ice skates size 5-6, leather shoes, $5. ea.; 1 school type desk unit shelf under chair, $5; 1 Goodyear foam mattress, full size, 3 in. thick. $10. 271-4486.

SKIS: Fisher Alu. metal, 195 cm, $30; boots, size 9, buckle Nordica, $15, Raichle, $20. 431-5716.

TRUCK: '54 Chev., ½ ton pick-up, 6 cyl., r/h $200. After 5 p.m. 541-6351.

AMPLIFIER: TV/FM booster/coupler amp., all transistor Winegard mod. BC-382, VHF/UHF/FM with outputs for 4 receiv., aver. gains: VHF/FM 9db, UHF 5 db., in orig. box, never used., $20. 757-0580.

plane
GRUMMAN
news

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Okay, boss, now it's your turn—how do you think you stack up?

Jake Bussolini is a man who likes to lay his cards on the table. Three years ago when he was section chief in Reliability and Maintainability in Plant 35, he set up a series of no-holds-barred meetings at which the 225 people in his group could ask questions about their jobs and get direct and accurate answers from Bussolini. As director of Administrative Operations for Technical Operations, the position he now occupies, Bussolini has taken his innovative approach to employee communications a step further. His new "Rate Your Boss" program not only gives employees a voice in the corporate job appraisal system, it might well provide supervisors with insights they've never had access to before.

"It could be a disruptive concept if it isn't handled properly," Bussolini admits. "One prerequisite for this program is trust in your people and their ability to make honest and objective appraisals. We have designed the program partly as a self-development aid for supervisors and we hope the information will give them valuable clues regarding what they're doing well and where they need improvement."

Provides insight

The key to the program is anonymity. "This way," Bussolini explains. "supervisors can be relatively certain that the results are honest and objective. They should also provide some interesting insights into what employees expect from their bosses."

To ease the minds of those supervisors who haven't heard of Bussolini's concept, he adds, "We're only evaluating supervisors in Administrative Operations, not those in other areas of Technical Operations or other parts of the Company. However, our experience may be useful to others who wish to try similar programs."

How does the system work? Last month, each of the 600 people reporting to Bussolini received a 17-item questionnaire titled "Rating Your Supervision." The first dozen questions required "yes" or "no" answers relating to specific levels of supervision within Administrative Operations.

Typical questions are:

- "Do you feel that your supervision adequately recognizes and utilizes your abilities?"
- "Are you aware of the potential growth possibilities insofar as your personal future is concerned?"
- "Are your ideas, suggestions and recommendations sought and encouraged by supervision?"
- "Do you believe that the varied skills and abilities of the personnel in your group are understood, integrated and maximized?"
- "Does your supervision keep you adequately informed about activities in the Section, the Directorate and the Company?"
- "Do you believe your supervisor gives serious consideration to building and maintaining morale?"
- "Would you welcome more contact with your supervisor?"

Items 13 through 17 are designed to give employees a chance to state their opinions. Included are:

- "What one thing could your supervision do to make themselves more effective?"
- "What is your overall opinion of morale?"
- "What is your overall opinion of your supervision?"

"This latter section may the most important part of the questionnaire," Bussolini points out. "It is designed to actually give our people an opportunity to take part in formulating at least part of the policies that govern them."

While the tone of some questions may be likened to a loaded gun, their purposeful and helpful intent is more clearly understood by taking a look at the program's origin. "Early last year," Bussolini explains, "Senior Vice President Grant Hedrick, who is director of Technical Operations, decided to implement a major consolidation of operational and administrative elements of his department. The new organization represented a significant change for most employees. Nearly everyone had a new supervisor and most people were understandably concerned about such things as their ability to contribute, what the new organization would mean to them, and how their talents would be used." To offset the concerns of people in his own group, Bussolini reverted to his former tactics by setting up a series of two-way "rap" sessions designed to open communication channels and outline the goals and objectives of his new organization.

Strictly voluntary

While most of the initial meetings covered fairly routine matters, Bussolini noticed one question consistently came up at most of the sessions: "Why don't we ever have an opportunity to say anything about our bosses or the policy decisions they make?"

"Why not?" Bussolini began asking himself. The result, of course, culminated in the questionnaire mailed to Administrative Ops employees on December 15.

"From the beginning," Bussolini says, "we established two basic objectives for the program. First, that the evaluations be fair and not merely serve as outlets for hostility. Second, that the questionnaires be designed so they could be used to measure trends to see whether supervisors are actually improving in the eyes of their employees."

The program is entirely voluntary and employees are not required to fill out the questionnaires unless they want to. Deadline for all questionnaires, though, is February 1. Thus far, only a sampling of completed forms have trickled back to Pete Portanova, who is a member of Bussolini's staff to whom all questionnaires are addressed and who will ultimately chart the responses and trends.

"It's still early," says Bussolini. "We don't know what the results of the program will be but we do expect to be able to gain a lot of insight into the effectiveness of our supervision. At this point, only one thing is certain: whatever the final response might be, we are trying something new that could well be a major step toward even greater employee participation in the future."

First Hawkeye buy. Navy bought the first production E-2C on January 10, more than 1 1/2 months ahead of schedule, following two complete weapons systems test flights by a Navy crew at Bethpage. Shown following the final flight are Al Verderosa, Lt. Rick Lundy, Lt. Cdr. Bill Hennessey, Capt. Bob Belter, Navy Plant Representative at Bethpage, Lt. Cdr. Mike Ungermann, Hawkeye Program Director Tom Guarino, and pilot Dick Van Allen. (Photo by Bob Settles)

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Trying to speed delivery to you . . .

. . . We're trying something new. Starting with this issue of Plane News, we will affix directly on Plane News—instead of using an addressed envelope—the names of Grumman retirees and others on our mailing list in hopes of getting the paper to you quicker.

Art Leach, director of Communication Services, assures us that this new procedure will not only save the Company money, but, just as important, it will help speed the delivery of Plane News to you also. We'll leave it up to you to tell us whether he's telling the truth.

Delay for astronauts

We're sorry we're delivering Plane News on Monday rather than Friday this time but we held up the issue to make sure we could cover the visit of Apollo 17 astronauts to Bethpage on January 23—the day we normally would go to press.

CALENDAR of events

Notice of events for period Feb. 9 to Feb. 23 should reach Plane News Feb. 4.

Coin Club: Every Wed., 12:05 p.m., Vendor conf. rms., Plant 25, informal lunchtime meet. Ken Hale, Ext. 1936.

Family Campers: Sun., Feb. 4, 5 p.m., Guard Hdqts. Bldg., Plt. 18, monthly meet., guests welcome. Herman Heinlein, Ext. 2891.

Fencing Club: Mon., 5 p.m., Plt. 30, cafe, instruc. & competition. George Kegney, Ext. 7541.

Flying Club: Fri., Feb. 9, Plt. 28, F.A.A. Safety film, guests welcome.

Rod and Gun Club: Wed., Jan. 31, 7:30 p.m., John's Oasis, Hazel St., Hicksville, annual meet. John Crawford, Ext. 2683.